

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## Communications Division

Sixth Annual Report to the Governor and the Legislature

# Sixth Annual DIVCA Report For the Year Ending December 31, 2012

The Digital Infrastructure and  
Video Competition Act of 2006

“To promote competition, the state should establish a state-issued franchise authorization process that allows market participants to use their networks and systems to provide video, voice, and broadband services to all residents of the state...” DIVCA 5810

July 31, 2014



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## Executive Summary

This report presents the video and broadband service findings relating to California state video franchise holders and their affiliates that must be reported annually to the Legislature pursuant to the Digital Infrastructure and Video Competition Act of 2006 (DIVCA).<sup>1</sup> This report is the sixth annual report issued to the Legislature and the Governor, covering the reporting period January 1, 2012 through December 31, 2012.

### Video Availability

As of December 2012, AT&T and Verizon offered wireline video to 6.5 million households (HHs) – more than half of all California households. While the pace at which AT&T and Verizon have deployed their new video / broadband infrastructure slowed considerably during 2012, the result of their investments since the passage of DIVCA in 2006, is that almost three times as many households (9.6 million households) have two or more wireline video providers to choose from than were available in 2007 (3.4 million). Most urban and suburban areas have two or more franchise holders offering wireline video. Fewer rural areas have two or more franchise holders offering wireline video. Almost 3 million California households still have access to only one wireline video provider, and most areas with one wireline provider are located in rural areas. Satellite-delivered video services as well as over-the-top video content providers are additional options in nearly all locations.<sup>2</sup>

### Broadband Availability

The percentage of households offered wireline broadband service at speeds greater than 200 kbps<sup>3</sup> by two or more state video franchise holders or their affiliates, increased to 90.3% of HHs (11.5 million HHs) in 2012. The percentage of households offered wireline broadband service at speeds greater than 200 kbps by three or more state video franchise holders or their affiliates, increased to 10.2% (1.3 million HHs) in 2012. Rural areas generally have fewer choices of wireline or fixed wireless broadband providers.

The data show that available wireline broadband speeds are generally faster in urban areas. Additionally, many Californians are subscribing to faster speed tiers than in previous years. This is expected, as faster speeds become available in more areas and as people begin to utilize applications and services that require more bandwidth, such as streaming video and audio.

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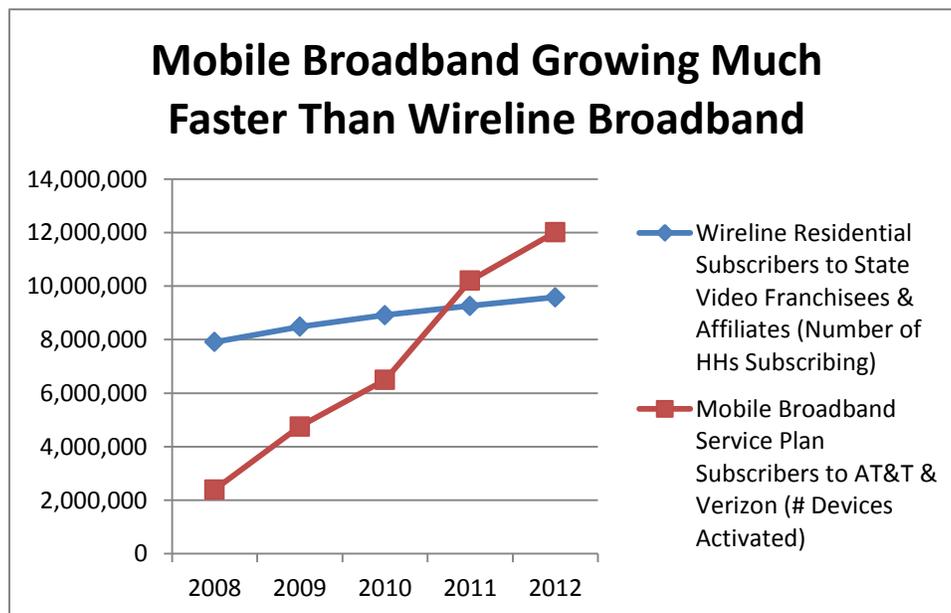
<sup>1</sup> Cal. Pub. Util. Code §5800 – 5970.

<sup>2</sup> Satellite providers are not required to obtain a franchise.

<sup>3</sup> See the beginning of the broadband section of this report (page 19) for a detailed explanation of the FCC's definition of broadband "from as low as 200 kbps," used in this and all previous DIVCA Reports. Sources: FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559–64, paras. 5–10 (discussing the 200 kbps symmetrical standard).

## Broadband Subscriptions

Residential wireline broadband subscriptions to state video franchise holders and their affiliates at speeds greater than 200 kbps<sup>4</sup> continued to increase during 2012, growing by 3.5% to 9.6 million subscribers. Residential wireline broadband penetration at speeds greater than 200 kbps also increased 2.3 percentage points to 75.6% of California households during 2012.<sup>5</sup> While wireline broadband subscriptions continue to grow, wireless has grown more; the number of AT&T and Verizon mobile broadband subscribers exceeds total wireline subscriptions by nearly 2.5 million subscribers. Rather than being a substitute, most users of wireless broadband use mobile broadband services in a manner which is complementary to their use of wireline broadband.<sup>6</sup>



Cable modem continues to be the technology most used by providers of wireline and fixed wireless broadband to serve residential households (54% of all residential broadband connections). In addition, fiber optic technology deployed to the home grew to 7% (698,627) of all wireline broadband subscribers in 2012.

<sup>4</sup> The metrics in this and all previous DIVCA reports continue to use the FCC's 2010 definition of broadband as ranging "...from as low as 200 kbps.... Some recent broadband offerings even include 50 to 100 Mbps." Sources: FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559-64, paras. 5-10 (discussing the 200 kbps symmetrical standard).

<sup>5</sup> For the purposes of this report, penetration is defined as number of subscribers divided by the total number of households in the state.

<sup>6</sup> "[Cell Internet Use in 2013](#)", Pew Research Center, September 16, 2013.

## **Build-out and Low-income Requirements**

DIVCA includes a statutory three and five year build-out obligation that applies to Verizon and AT&T. Verizon has met this obligation, but AT&T qualified for a delay based on §5890(e)(4) of the Public Utilities Code (PU Code), which permits a delay if less than 30% of the households to which AT&T offers video service have subscribed to that service for six consecutive months. AT&T continued to qualify for this delay in 2012. Also, under DIVCA, five years after Verizon and AT&T begin offering video service and continuing thereafter, each is obliged to ensure that at least 30% of the households with access to video service in their respective video service territories are low income households.<sup>7</sup> Both AT&T and Verizon met this obligation at the five year mark and the continuing obligation in 2012.<sup>8</sup>

## **Cross-Subsidy Issue**

DIVCA prohibits state-issued video franchise holders that provide stand-alone residential primary line basic telephone service, from increasing the prices they charge customers for such services to finance the cost of deploying a network to provide video service. A previous CPUC decision, which prevented AT&T and Verizon from raising their standalone basic service rates beyond levels that reflected cumulative inflation between 1995 and 2010, expired at the end of 2010. On December 6, 2013, the Utility Reform Network (TURN) filed a complaint alleging that AT&T's basic rate increases were not just and reasonable. Among the issues raised by TURN in its complaint was DIVCA's prohibition against cross subsidy. Staff now expects that the Commission will address the cross-subsidy issue in the context of adjudicating this complaint or in a related investigation requested by TURN.

## **DIVCA Workshops Planned for 2014 or Early 2015**

Based on CD staff's interpretation of DIVCA's provisions for the renewal of state franchises, which provide no opportunity for wide ranging comments on the performance of video service providers subject to DIVCA, CD staff is proposing to conduct workshops in 2014 or as early in 2015 as feasible. We plan to seek input from local governments, consumers, and other stakeholders about the performance of DIVCA, since its inception. The purpose of the workshops would be to evaluate DIVCA in terms of the achievement of its stated policy objectives, to assess the effectiveness of the administration of DIVCA by both the Commission and local governments and to improve coordination between the two, given their joint responsibility for administering the statute.

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<sup>7</sup> DIVCA §5890(b)(2)

<sup>8</sup> We are currently analyzing an ambiguity within DIVCA that may change the manner in which we calculate DIVCA's low income requirement. Some of the findings regarding compliance with this requirement in this report may be subsequently revised.

## Overview of DIVCA

On September 29, 2006, the Governor signed into law, Assembly Bill 2987, the Digital Infrastructure and Video Competition Act of 2006 (DIVCA).<sup>9</sup> DIVCA's goals are to promote rapid, widespread competition in the broadband and video markets and accelerate the deployment of additional infrastructure in California.

DIVCA is implemented by the CPUC and addresses not only video franchising, but also provides a vehicle for the deployment of additional broadband infrastructure within California, particularly to unserved and underserved areas. DIVCA fundamentally changed video franchising within California by transferring the authority for issuing franchises for the provision of video services from local entities to the State of California. The State Legislature designated the CPUC as the sole franchising authority for issuing state video franchises as of January 1, 2007.

California was the eighth state to fundamentally reform video franchising to facilitate competitive video and broadband entry.<sup>10</sup> As of 2014, 25 states had transferred video franchising authority to the state. These states include California, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Indiana, Kansas, Louisiana, Michigan, Missouri, New Jersey, North Carolina, Nevada, Ohio, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and Wisconsin.<sup>11</sup>

Prior to DIVCA, cable television franchises were issued by cities, counties and special districts. This required cable operators to negotiate separate franchise agreements with each local entity where they wished to provide video service. California contains 58 counties encompassing 482 incorporated municipalities (cities and towns). These local franchise agreements required that service providers comply with specific customer service and performance standards and other requirements that often varied by locality.

For new entrants seeking to provide video and broadband services over a large area, the process of negotiating franchise agreements with each individual local entity would inevitably have been an arduous process, delaying their entry into the market by many years. To speed the entry of new video and broadband providers into the marketplace, the Legislature sought to replace the local franchising system with one in which the State would issue video franchises. The CPUC was designated as the agency charged with issuing state video franchises.

In order to carry out its statutory goals, the CPUC developed and adopted rules to implement DIVCA through a series of three formal decisions and several resolutions. See Appendix A for descriptions of

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<sup>9</sup>A.B. 2987, Ch. 700, Stats. 2006.; Cal. Pub. Util. Code, §§5800 – 5970 - Digital Infrastructure and Video Competition Act of 2006 (DIVCA).

<sup>10</sup>Communications Daily, Passage of Cal. Video Bill Expands Franchise Reform to 1/3 of U.S. Population, available at [http://listserv.educause.edu/cgi-bin/wa.exe?A3=ind0609&L=TELECOM-HE&E=quoted-printable&P=8882&B=-----\\_%3D\\_NextPart\\_001\\_01C6D0FF.101FDEB9&T=text%2Fhtml;%20charset=us-ascii](http://listserv.educause.edu/cgi-bin/wa.exe?A3=ind0609&L=TELECOM-HE&E=quoted-printable&P=8882&B=-----_%3D_NextPart_001_01C6D0FF.101FDEB9&T=text%2Fhtml;%20charset=us-ascii). Last visited September 5, 2006.

<sup>8</sup>National Conference of State Legislatures, <http://www.ncsl.org/research/telecommunications-and-information-technology/statewide-video-franchising-statutes.aspx>. Last Visited March 24, 2014.

these decisions.

Following the adoption of these new rules, the CPUC began issuing ten-year state video franchises. The Commission will issue a state video franchise, so long as an applicant is eligible for a state franchise, the application is complete, the applicant pays the \$2,000 application fee and provides evidence of having obtained an appropriate surety bond, and the applicant swears that it will adhere to all state and federal laws, rules, and regulations.

Holders of state video franchises are required to submit data annually on April 1 relating to their provision of video and broadband services, and information pertaining to their service to low-income households within the holders' video service areas as of December 31 of the previous year. DIVCA directs the CPUC to aggregate this data and report it to the Governor and the Legislature annually. A description of the data collected is contained in Appendix B: Collecting Data Mandated by DIVCA.

While DIVCA provides that the CPUC is the sole franchising authority for issuing state video franchises,<sup>12</sup> the statute also provides that video service providers are not public utilities and prohibits the Commission from imposing any requirements on state-issued franchise holders that are not expressly provided by DIVCA.<sup>13</sup>

DIVCA defined the jurisdiction of the Commission quite narrowly, limiting its enforcement authority to the following provisions:

- Issuing and renewing 10-year video franchises.<sup>14</sup>
- Gathering data from state-issued video franchise holders on their deployment of video and broadband services on an annual basis.<sup>15</sup>
- Aggregating data submitted by holders for use in an Annual Report from the CPUC to the Governor and Legislature.<sup>16</sup>
- Ascertaining that holders of video franchises have complied with build-out and anti-discrimination requirements.<sup>17</sup>
- Enforcement of the prohibition on the use of telco-video cross-subsidization.<sup>18</sup>
- Collecting fees from state-issued video franchise holders to equal the cost of carrying out the CPUC's duties under DIVCA.<sup>19</sup>

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<sup>9</sup> Cal. Pub. Util. Code §5840 (a).

<sup>13</sup> *Id.* §5820(c).

<sup>14</sup> *Id.* at §5840 (a).

<sup>15</sup> *Id.* at §5960 (b).

<sup>16</sup> *Id.* at §5960 (c).

<sup>17</sup> *Id.* at §§5890.

<sup>18</sup> *Id.* at §5940, 5950; Decision Adopting a General Order and Procedures to Implement the Digital Infrastructure and Video Competition Act of 2006 at 174 (D. 07-03-014, Mar. 1, 2007). (Phase 1 Decision).

<sup>19</sup> Cal. Pub. Util. Code § 5810(a)(3).

## Video Findings

This section of the report summarizes data describing video services that are provided by state-issued video franchise holders and their local affiliates, submitted in response to the statutory requirements of the Digital Infrastructure and Video Competition Act of 2006 (DIVCA). These summaries show the trends in video deployment and subscribership since DIVCA was implemented in 2007 . This includes the continuing transition from local franchises to state-issued franchises.

The data represented here were collected from state-issued video franchise holders and their local affiliates. The data collected include the number of households to which video has been deployed, the number of state-issued franchises and amendments granted and the number of subscribers to video service offered by state-issued video franchise holders. A description of the data collected is contained in Appendix B: Collecting Data Mandated by DIVCA.

Additionally, this report discusses AT&T and Verizon's progress in meeting their build-out and low income requirements as established by DIVCA. Lastly, this report discusses the prohibition against telco-video cross-subsidization.

## A. Verizon Has Met Its Build-out Requirements; AT&T Qualified for an Extension

DIVCA requires the CPUC to monitor state-issued franchise holders' deployment of infrastructure and services to enforce build-out requirements contained in the statute.<sup>20</sup> The build-out requirements for holders with over one million telephone customers are shown in the table below:

### Build-out Requirements

Time Frame	Holders with more than one million telephone customers in CA	
	Predominantly fiber optic to premises (Verizon)	Predominantly non-fiber optic to premises (AT&T)
Within 2 years	25% of customer households in a telephone service area must have access to video service	N/A
Within 3 years	N/A	35% of households in telephone service area must have access to video service
Within 5 years*	40% of customer households in a telephone area must have access to video service	50% of households in telephone service area must have access to video service

**\* Not required to meet until 2 years after at least 30% of households with access become subscribers for 6 consecutive months**

Both AT&T and Verizon have exceeded their two and three year build-out obligations, as defined in §5890(e) of the PU Code. However, only Verizon has met its five year build-out obligation by offering video services to at least 40% of the households in its telephone service area, while AT&T was entitled to an extension to meet its 50% obligation based on the Public Utilities Code § 5890(e)(4).

This section of DIVCA permits a video service provider with more than one million telephone subscribers to delay meeting this obligation until it has a 30% video take rate for six consecutive months. During 2012, AT&T continued to qualify for a delay in meeting its five year build-out obligation, based on the fact that less than 30% of the households with access to video offered by AT&T subscribe.<sup>21</sup>

<sup>20</sup> Phase I Decision, at 7; See Cal. Pub. Util. Code §5890.

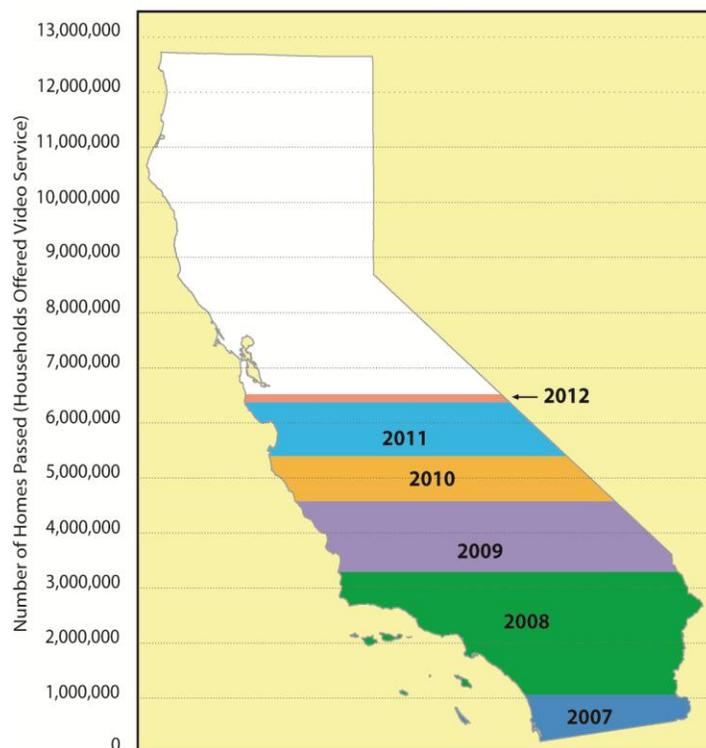
<sup>21</sup> Cal. Pub. Util. Code §5890 (e)(3).

## B. Overall Video Deployment Increased at a Modest Pace, While Deployment by AT&T and Verizon Declined Significantly

Video deployment measures the number of households that are offered video services. The number of households offered video by all state video franchise holders and their local affiliates increased 3.2% to 20.6 million during 2012, compared with a 4.5% increase to 19.97 million in 2011.<sup>22 23</sup>

While AT&T and Verizon continued to deploy video service to new households during 2012, the rate of deployment dropped from an increase of 18% or 978,477 households in 2011 to an increase of 2.3% or 148,215 households in 2012. This appears to be consistent with a continuation of the scaled back investment in wireline broadband networks each company announced in 2009.<sup>24</sup> Indeed, as Verizon and AT&T have met or approached meeting their build-out obligations required under DIVCA, each has chosen to sharply reduce investment in wireline video deployment in California during 2012.

VIDEO DEPLOYMENT BY AT&T AND VERIZON



<sup>22</sup> Due to multiple franchisees offering video to the same households, more households are offered video than there are households in the state (12,675,876). For details, see Appendix C: Methods, Sources, and Data Limitations.

<sup>23</sup> Due to a reporting error, 2011 video deployment data in last year's report incorrectly reported a 5% decrease in video deployment to 18.2 million households. In fact, in 2011 there was a 4.5% increase to 19.97 million households offered video.

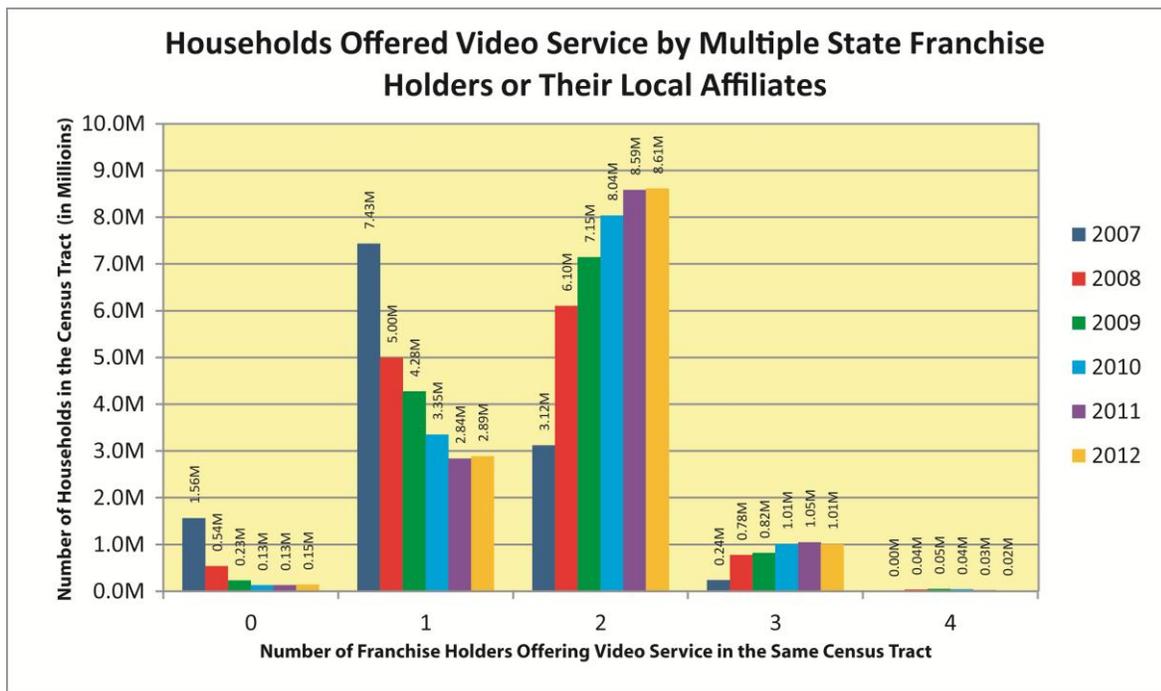
<sup>24</sup> Third Annual DIVCA Report, page 4, published October, 2010.

### C. Growth in the Choice of Video Service Providers Was Flat in 2012

While the data on the previous page shows there has been a 3.2% increase in the total number of households offered video during 2012, the chart below illustrates that the number of households located in census tracts in which two or more state video franchise holders or their local affiliates offer video services has remained flat during 2012. Approximately 550,000 more households obtained a second video provider in 2011, while 20,000 obtained a second video provider in 2012. However, since the passage of DIVCA in 2006, almost three times as many households (9.6 million households) have two or more wireline video providers to choose from than were available in 2007 (3.4 million).

While the number of census tracts in which multiple providers offer “pay television” video service has slowed, there has simultaneously been huge growth in over-the-top video (OTT) viewing on broadband Internet infrastructure.

“Growth in the over-the-top market will more than double by 2017, as internet connected devices and streaming services rise in popularity simultaneously,” wrote Price Waterhouse Coopers in their “Global Entertainment and Media Outlook” report published in July 2013.<sup>25</sup> ABI Research published a study in April 2013 stating: “The OTT market was \$8 billion as of 2012, growing at a near 60% clip over the previous year. Continued rapid growth will push the market past \$20 billion by 2015.”<sup>26</sup>



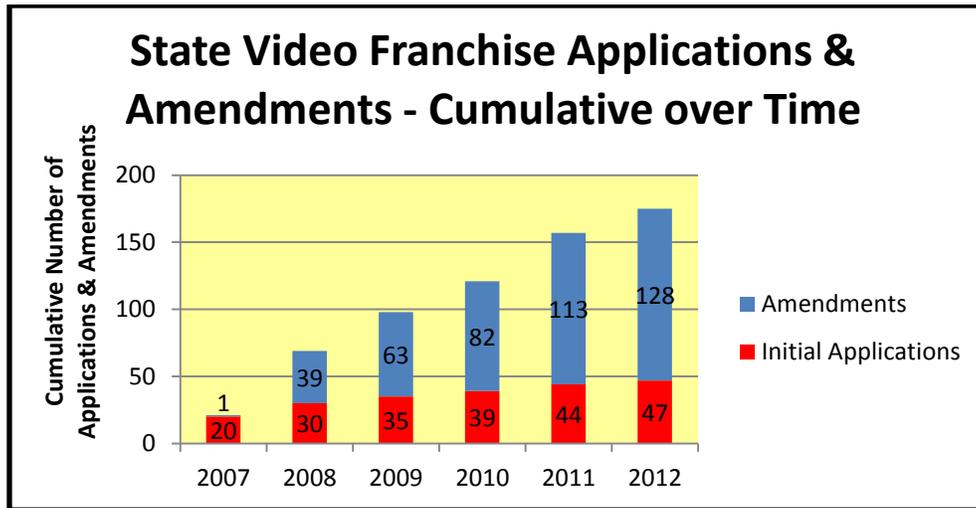
<sup>25</sup> “PwC Prediction: OTT Market Growth Will Double in Next Four Years,” Media Market Labs, July 3, 2013, <http://www.magnetmediafilms.com/blog/pwc-prediction-ott-market-growth-will-double-in-next-four-years/>

<sup>26</sup> “OTT Video Market Forecast to Hit \$20B By 2015,” Media Post News, April 11, 2013, <http://www.mediapost.com/publications/article/197855/ott-video-market-forecast-to-hit-20b-by-2015.html>

## D. State Video Franchising Growth Is Beginning to Slow

A state-issued video franchise grants the holder the right to offer video services in all or part of the state. State-issued video franchises are not exclusive. Multiple video service providers can receive video franchises for the same geographic area. Maps representing each video franchise are contained in Appendix D: Video Franchise Area Maps.

The cumulative bar chart below, shows that the rapid rate at which initial state-issued video franchises have been granted since 2007 has slowed, increasing by only three in 2012, down from five in 2011. Similarly, the rate of new amendments issued also slowed, to 15 in 2012, down from 31 in 2011.



The growth in the cumulative number of initial franchises and amendments approved by the CPUC reflects the continued transition from local franchises to state-issued franchises. We estimate that by 2017, all video service providers will be holders of state-issued franchises and that all local franchises will have been converted to state-issued franchises.

Under DIVCA, an incumbent cable operator has the option of opting into a state-issued franchise once a competing video provider, with a state-issued video franchise, begins operating in the incumbent operator's local franchise area. If the incumbent does not exercise this option or a new video service provider does not begin providing service in its local franchise area, the incumbent's local franchise remains in effect until the franchise expires, after which the incumbent must seek a state-issued franchise.

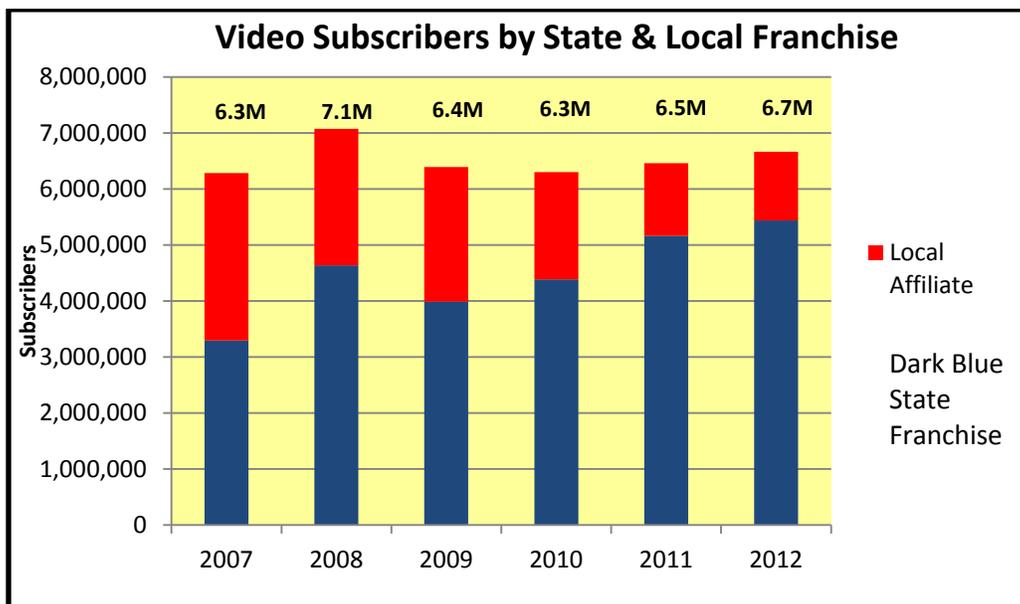
Most incumbent cable companies opted to shift to state-issued video franchises soon after new entrants began providing service in one or more of their local franchise areas in 2007. This is reflected by the 20 initial applications granted in 2007 and 10 additional initial applications granted in 2008. It is also reflected by the year to year cumulative increase between 2008 and 2011 in the number of amendments to the incumbent's existing state-issued franchises, as competing video service providers expanded into more of the incumbent's local franchise areas or the incumbents' existing local franchises expired.

## E. Video Penetration Increased 3.2% during 2012, While the Shift to State Video Franchises Continues

The aggregate number of video subscribers to state video franchisees or their local affiliates increased by 2.5% (162,358) in 2011, and 3.2% (205,207) in 2012 to 6.7 million.<sup>27</sup>

The shift towards state-issued franchises is also reflected in the number of households subscribing to video service from state-issued franchise holders compared with households subscribing to video service from their local affiliates. The chart below shows that the number of households subscribing to video provided under state-issued franchises increased by 65% (2.1 million) between 2007 and 2012, to over 5.4 million households.

However, subscriber growth by state-issued video franchise holders slowed from 17.8% in 2011 to 5.3% in 2012. We expect that the growth in the number of subscribers who are provided video service under state-issued franchises will continue to increase in the coming years but at a slower pace until 2017, when we estimate that all local franchises will have been converted to state franchises. Subscribership to “pay T.V.” video services may decline in the coming years due to intermodal competition for video content.



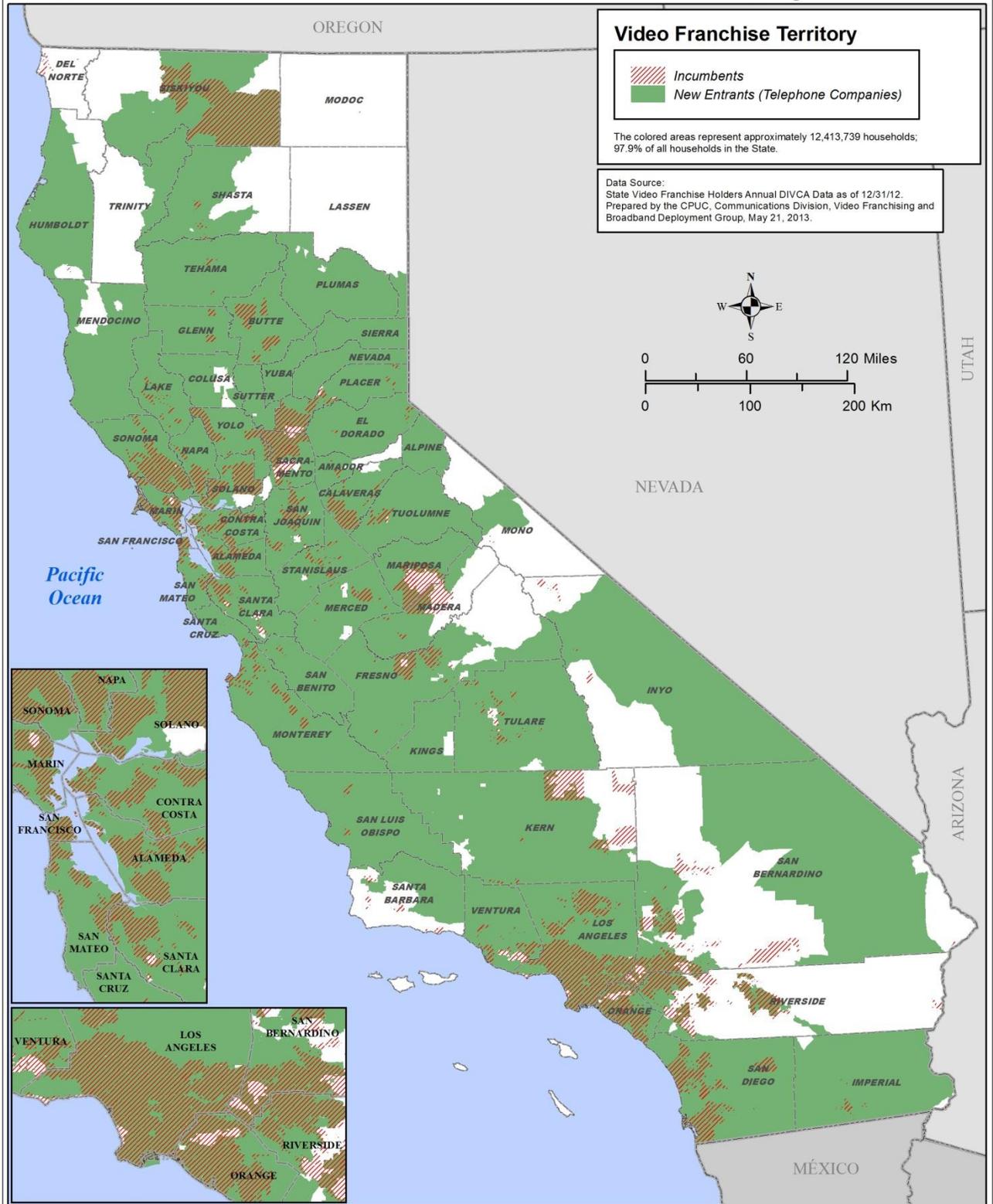
The map on the next page shows that the new entrants’ (telephone companies) franchise territories cover most of California. The telephone companies’ entry into the video service market was expedited by the passage of DIVCA in 2006. A much more detailed version of the map shown on the next page is available on the CPUC website at: [ftp://ftp.cpuc.ca.gov/VideoFranchiseTemplate/All%20Video%20Franchise%20Territory%2020140101%20\(b%20L%20EC%20Status\).pdf](ftp://ftp.cpuc.ca.gov/VideoFranchiseTemplate/All%20Video%20Franchise%20Territory%2020140101%20(b%20L%20EC%20Status).pdf)

<sup>27</sup> This year it became apparent that the subscriber decline reported in last year’s report was due to a reporting error. Last year’s report for 2011 incorrectly showed a 3.4% decrease (-215,740) in aggregate video subscribers instead of the actual increase of 2.5% (+162,358) in video subscribership for 2011. This is a variance of 5.9% (378,098 subscribers).



# STATE OF CALIFORNIA VIDEO FRANCHISING

## State-Issued Video Franchise Territory



## F. AT&T and Verizon Have Met Their Low Income Obligations

DIVCA includes low income build-out requirements for state-issued franchise holders with more than one million telephone customers in California.<sup>28</sup> AT&T and Verizon are the only two state video franchise holders meeting this threshold. The low income requirement is shown in the table below:

### Low Income Requirements

Time Frame	Holders with more than one million telephone customers in CA
Within 3 years	25% of households in a telephone service area with access to video service must be low-income households
Within 5 years	30% of households in a telephone service area with access to video service must be low-income households.
Annual requirement after 5 years	30% of low-income households in a telephone service area must continue to have access to video service.

Under DIVCA, five years after Verizon and AT&T begin offering video service and continuing thereafter, each is obliged to ensure that at least 30% of the households with access to video service in their respective video service territories are low income households. Both AT&T and Verizon met this obligation at the five year mark and the continuing or ongoing requirement for 2012.<sup>29</sup>

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<sup>28</sup> Cal. Pub. Util. Code §5890(j)(4); "Low-income household" means those residential households located within the holder's existing telephone service area where the average annual household income is less than thirty-five thousand dollars (\$35,000) based on the United States Census Bureau estimates adjusted annually to reflect rates of change and distribution through January 1, 2007.

<sup>29</sup> We are currently analyzing an ambiguity within DIVCA that may change the manner in which we calculate DIVCA's low income requirement. Some of the findings regarding compliance with this requirement in this report may be subsequently revised.

## G. Prohibition Against Telco-Video Cross-Subsidization

DIVCA prohibits state-issued video franchise holders that provide stand-alone, residential, primary line, basic telephone services, from increasing the rate they charge customers for this service to finance the cost of deploying a network to provide video service.<sup>30</sup>

Both DIVCA<sup>31</sup> and the CPUC's Uniform Regulatory Framework (URF) decision prohibited AT&T and Verizon from raising such rates at all, prior to January 1, 2009, except to reflect increases in inflation.<sup>32</sup> The CPUC's Decision D. 08-09-042 OP 12 extended this freeze on basic rate increases (other than increases linked to inflation) to December 30, 2010, after which AT&T and Verizon were permitted to adjust rates at will.

On June 12, 2013, Commission staff wrote letters to AT&T and Verizon about the potential relationship between cross subsidization and the fact that both firms raised rates for both flat and measured residential basic services, since the freeze on these rates expired at the end of 2010. Both AT&T and Verizon sent written responses to these letters. Based on the responses received, staff concluded that we do not currently have sufficient information to determine whether or not AT&T is complying with §5940 of the Public Utilities Code or whether Verizon would be in violation of §5940 if it was to raise rates beyond those authorized in D. 08-09-042.

Subsequently, on December 6, 2013, The Utility Reform Network (TURN) filed a complaint with the Commission alleging that market forces have failed to sufficiently constrain AT&T's increases to its basic service rates and that rates for these services should be rolled back and capped.<sup>33</sup> In addition, TURN has requested that the Commission open an investigation into the status of competition in the California telecommunications marketplace to examine why, according to TURN, market forces have failed to ensure that AT&T's rates are just and reasonable and whether the same factors apply to the other URF LECSs.<sup>34</sup> Finally, TURN has asked the Commission to investigate whether the basic service rates of AT&T and the other holders of state video franchises are cross-subsidizing the construction of a network for the provision of video services, in violation of DIVCA.

On January 2, 2014, AT&T submitted a new advice letter requesting increases to its rates for residential flat and measured service. However on February 3, 2014, the Commission staff suspended the advice letter. In addition, on June 3, 2014, the Commission staff renewed this suspension for another six months. We now expect that DIVCA's cross subsidy prohibition along with the broader rate issues raised by the TURN complaint will be addressed during that proceeding.

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<sup>30</sup> Cal. Pub. Util. Code §5940.

<sup>31</sup> *Id.* at §5950.

<sup>32</sup> Order Instituting Rulemaking on the Commission's Own Motion to Assess and Revise the Regulation of Telecommunications Utilities (D.06-08-030, Aug. 24, 2006).

<sup>33</sup> Utility Reform Network vs AT&T California, C. 13-12-005 at 4,6

<sup>34</sup> *Id.* at 7

## Background about AT&T and Verizon Rate Increases

While the stand-alone, residential, primary line, basic telephone rate adjustments authorized by D. 08-09-042 were limited to inflation, inflation was measured by the Commission on a cumulative basis reflecting the estimated amount by which AT&T's basic rates would have increased due to inflation had they not been frozen in 1995.<sup>35</sup> Based on these inflation estimates, the Commission allowed AT&T, Verizon, and the other URF LECs to raise rates for flat rate basic service by \$3.25 annually between 2009 and 2010 and to raise their rates for measured service by a percentage amount equal to the authorized increase for each URF LECs' flat rate service. As a result, AT&T was authorized to raise rates for flat rate service from \$10.94 at the end of 2008 to \$17.44 by the end of 2010. Similarly, it was authorized to raise rates for measured service during this same period from \$5.83 to \$9.32. Verizon was permitted to raise rates for flat rate service from \$17.66 in 2008 to \$24.14 in 2010 and to raise rates for measured service from \$10.24 to \$14.01. Neither AT&T nor Verizon raised rates by the full amount authorized by D. 08-09-042 during 2009 and 2010. However, between 2011 and 2013 AT&T raised rates for flat rate service to \$23.00 and raised rates for measured service to \$18.35. This represents an increase of \$5.56 (32%) over the rate authorized in D.08-09-042 for flat rate service and an increase of \$9.03 (97%) over the rate authorized for measured service. Verizon also raised rates for flat and measured service but its rates for these services remain below the levels authorized by D. 08-09-042.

The fact that AT&T raised rates for basic service beyond the levels authorized in D. 08-09-042 or that Verizon may do so in the future does not prove or disprove that residential basic services are cross-subsidizing a network used to provide video service. To make this determination significant analysis is required. Revenues for residential basic service, video service and other services that use the shared network to provide video service would need to be compared to their respective costs. The Commission would need to audit those costs to ensure they have been accurately assigned to each service. Such an audit would be onerous as it would require the Commission to perform a cost of service analysis, which has not been performed in decades, since the Commission adopted its New Regulatory Framework and established price caps to replace cost of service regulation. In addition, if either AT&T or Verizon provides residential basic service and video service through separate corporate affiliates, the transactions between those affiliates would need to be audited to ensure that they have not resulted in cross-subsidization.

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<sup>35</sup> D.08-09-042 at 37

## H. Role of Communications Division Staff in DIVCA Consumer Protection

Section 5900(c) of the Public Utilities Code states that “the local entity (county or municipality) shall enforce all of the customer service and protection standards of this section with respect to complaints received from residents within the local entity’s jurisdiction.”<sup>36</sup> Despite this intent of DIVCA, Communications Division (CD) staff at the CPUC continues to receive and answer many calls each year from residents and local municipalities, who have complaints and questions about services provided by holders of state-issued video franchises.

Examples of questions and topics that the CD staff typically addresses include: quality of service issues, pricing concerns, line extension disputes, and public, educational, & governmental (PEG) access issues. CD staff always responds to the inquiries staff receives, often by telephone and sometimes in writing. In addition to answering questions and providing information relating to the inquiry, in most situations, CD staff also refers people to their local municipality, as the statute states that “the local entity shall enforce all of the customer service and protection standards of this section with respect to complaints received from residents within the local entity’s jurisdiction.”<sup>37</sup> CD staff also often speaks by telephone with local municipality staff about the complaint received and provides them with information relating to their role in the process. Sometimes, CD staff also assists by contacting the video franchise holder about the specific situation and meditates discussions between the local municipality and the video franchise holder.

CD Staff is responsible for ensuring that video service providers have valid state video franchises and for enforcing other franchise provisions of the statute. Some small video service providers have been found to be operating without either state or local video franchises. In these situations, CD staff begins by sending the video service provider a letter demanding that it obtain a state franchise as required by law. If the video service provider does not obtain a franchise, staff escalates the matter to the Commission’s Safety and Enforcement and Legal divisions, who initiate a formal proceeding if other measures taken by them fail. Throughout this process, staff coordinates with affected local governments to advise them of the current status of the matter and to seek relevant input.

Finally, based on CD staff’s interpretation of DIVCA’s provisions for the renewal of state franchises, which provide no opportunity for wide ranging comments on the performance of video service providers subject to DIVCA, CD staff is proposing to conduct workshops in 2014 or as early in 2015 as feasible. We plan to seek input from local governments, consumers, and other stakeholders about the performance of DIVCA, since its inception. The purpose of the workshops would be to evaluate DIVCA in terms of the achievement of its stated policy objectives, to assess the effectiveness of the administration of DIVCA by both the Commission and local governments and to improve coordination between the two, given their joint responsibility for administering the statute.

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<sup>36</sup> Public Utilities Code § 5900 (c-j)

<sup>37</sup> Public Utilities Code § 5900 (c-j)

## Broadband Findings

This broadband section of the DIVCA Report summarizes data describing broadband services at speeds greater than 200 kbps in California. The data presented in this section include: the number of fixed wireline and mobile broadband wireless service plan subscribers of state-issued franchise holders and their affiliates (AT&T Mobility & Verizon Wireless), penetration rates, census blocks with multiple broadband providers, download speed tier information, and the various technologies used to deploy broadband. The broadband section of this report analyzes data provided by state-issued video franchise holders and their affiliates, but does not include data from providers unaffiliated with state-issued franchise holders.<sup>38</sup>

There is a separate report published by the Commission, which includes broadband data collected from all broadband providers as of June 2012, including those unaffiliated with state-issued franchise holders, such as wireless Internet service providers and Local Exchange Carriers (LECs). The report, titled: “*June 2012 California Broadband Report: A Comparative Summary of Broadband Adoption for June 30, 2011, to June 30, 2012,*” was published in February 2014 by the Center for Economic Development at California State University, Chico in conjunction with the CPUC. In addition, “The 2013 California Advanced Services Fund Report,” covering the period January to December 2012, is available on the CPUC [website](#) at: <http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/CASF/CASFReports.htm>. That Report also includes information about state-wide broadband availability.

### A. FCC’s Definition of Broadband Used in This and All Previous DIVCA Reports

In 1999, the FCC defined broadband in the First Broadband Progress Report, “as a service capable of supporting upstream and downstream speeds in excess of 200 kbps in the last mile.”<sup>39</sup> The FCC website continues to define broadband as follows: “Broadband or high-speed Internet access allows users to access the Internet and Internet-related services at significantly higher speeds than those available through “dial-up” Internet access services. Broadband speeds vary significantly depending on the particular type and level of service ordered and may range from as low as 200 kilobits per second (kbps), or 200,000 bits per second, to 30 megabits per second (Mbps), or 30,000,000 bits per second. Some recent offerings even include 50 to 100 Mbps.”<sup>40</sup>

While the FCC continues to define broadband as ranging “from as low as 200 kilobits,”<sup>41</sup> the FCC’s 2010 National Broadband Plan recommended a 4 Mbps download speed / 1 Mbps upload speed benchmark that the FCC also used in its Sixth Broadband Progress Report, published in 2010<sup>42</sup> and the Eighth

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<sup>38</sup> Examples of broadband providers NOT included in this data are Local Exchange Carriers that are not Video franchise holders, Wireless Internet Service Providers, and mobile service providers like Sprint, T-Mobile, US Cellular and Metro PCS.

<sup>39</sup> *Eighth Broadband Progress Report*, FCC 12-90, Section III, Benchmarking Broadband, paragraph 18, page 19, Released 8/21/12, <http://www.fcc.gov/reports/eighth-broadband-progress-report>

<sup>40</sup> <http://www.fcc.gov/guides/getting-broadband>

<sup>41</sup> Id.

<sup>42</sup> *Sixth Broadband Progress Report*, 25 FCC Rcd at 9559–64, paras. 5–10 (discussing the 200 kbps symmetrical standard), 2010.

Broadband Progress Report, published August 21, 2012.<sup>43</sup> The 4 Mbps down stream / 1 Mbps up stream broadband speed benchmark is used by the FCC to determine “minimum broadband speeds for recipients of high-cost support.”<sup>44</sup> In the FCC’s USF/ICC Transformation Order Rulemaking, the FCC is currently “seeking comment on increasing the minimum broadband speeds for recipients of high-cost support to 10 Mbps downstream.”<sup>45</sup> Similarly, here in California, the California Advanced Services Fund (CASF) uses a minimum broadband speed benchmark of 6 Mbps download speed and 1.5 Mbps upload speed to qualify applications for consideration for CASF funding.

The metrics in this and all previous DIVCA reports continue to use the FCC’s definition of broadband, “from as low as 200 kbps.<sup>46</sup> While this report includes broadband connections as slow as 200 kbps in the reported DIVCA data, it is important to note that at the end of 2012, there were only 193,637 broadband connections with download speeds between 200 kbps and 768 kbps in California, and 737,864 broadband connections with download speeds between 768 kbps and 1.5 Mbps. This can be seen in the chart on page 30 of this report, titled “Wireline & Fixed Wireless Broadband Residential Subscribers by Download Speed – 2012.” We continue to include these slower broadband connections in the reported DIVCA broadband data, so we can track the progress of broadband deployment since the inception of DIVCA in 2008.

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<sup>43</sup> *Eighth Broadband Progress Report*, FCC 12-90, Section III, Benchmarking Broadband, paragraph 18, page 20, Released 8/21/12, <http://www.fcc.gov/reports/eighth-broadband-progress-report>

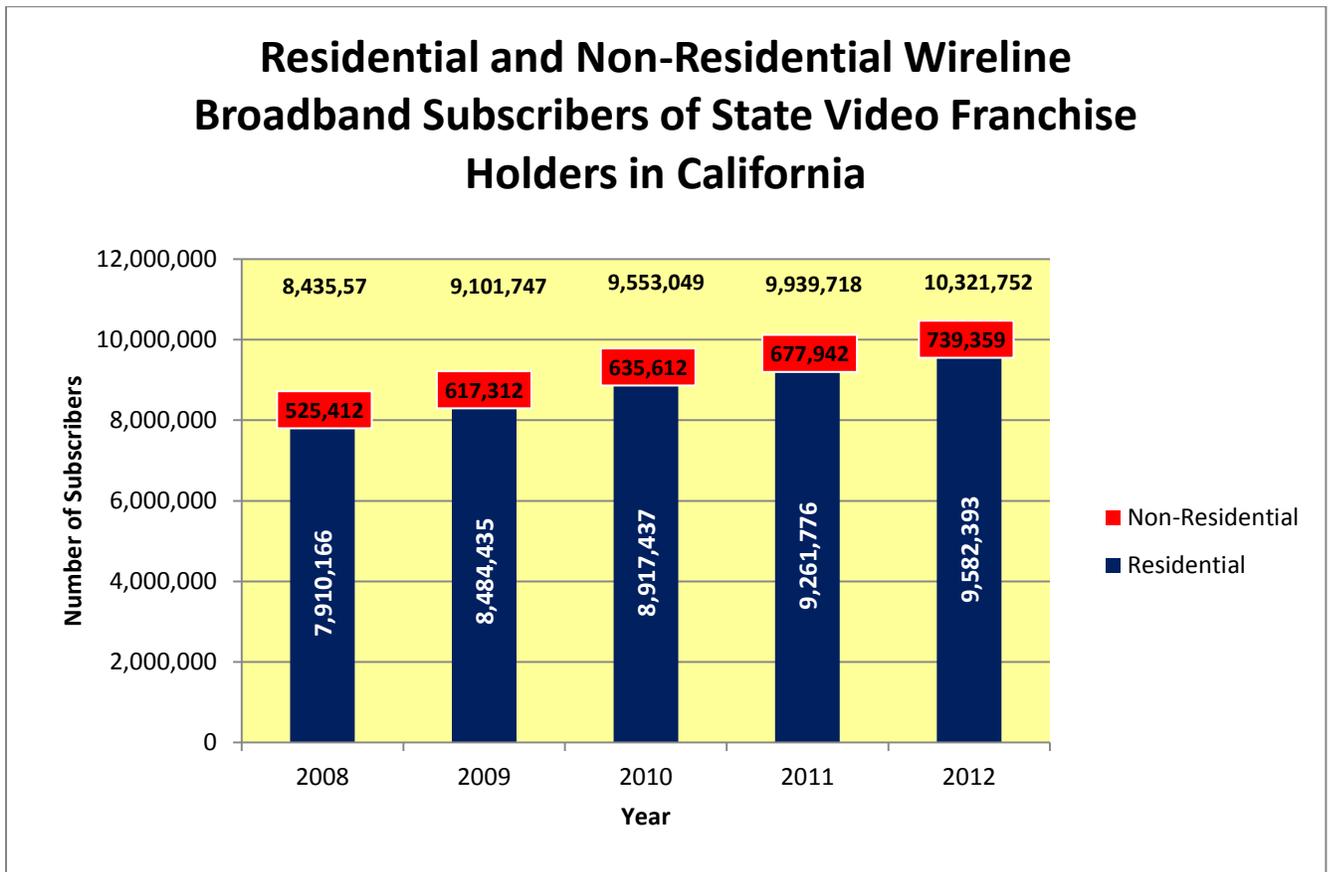
<sup>44</sup> FCC Public Notice, Wireline Competition Bureau Releases Connect America Cost Model Illustrative Results Using Higher Speed Benchmark, June 17, 2014, <http://www.fcc.gov/document/connect-america-cost-model-sample-results-using-higher-speed-benchmark>.

<sup>45</sup> Id. “The (FCC’s Wireline Competition) Bureau previously released model results for the adopted Connect America Cost Model using the current speed benchmark of 4 Mbps downstream / 1 Mbps upstream to determine the presence of an unsubsidized competitor. Using this speed benchmark, 4.25 million locations would be eligible for the Connect America Phase II offer of model-based support, of which 2.7 million are unserved by 3 Mbps downstream and 768 kbps upstream. The illustrative results we release today use the proposed speed standard of 10 Mbps downstream / 1 Mbps upstream to determine the presence of an unsubsidized competitor.”

<sup>46</sup> The FCC’s website: <http://www.fcc.gov/guides/getting-broadband> *Sixth Broadband Progress Report*, 25 FCC Rcd at 9559–64, paras. 5–10, 2010, (discussing the 200 kbps symmetrical standard), and <http://www.fcc.gov/guides/getting-broadband>

## B. Wireline Broadband Subscriptions Continue to Increase

The chart on the following page shows that the number of subscribers to broadband service at speeds greater than 200 kbps from state-issued video franchise holders and their affiliates has grown to 10.3 million connections since 2008.<sup>47</sup>



<sup>47</sup> These totals include subscribers who receive broadband via fixed wireless Internet connections. The total numbers of subscribers to fixed wireless broadband services offered by state-issued franchise holders and their affiliates is de minimus. For example, in 2012 there were only 677 subscriptions to these services.

**C. Wireline Residential Broadband Subscribers  
Increased by 3.5% to 9.6 Million during 2012,  
While Mobile Broadband Subscribers Increased by 17.7% to 12 Million**

Wireline<sup>48</sup> residential broadband subscribers (households), served by holders of state-issued video franchises or their affiliates at speeds greater than 200 kbps, increased by 3.5% during 2012 to 9.6 million subscribers and by 21.1% since 2008, as shown in the table below.<sup>49</sup> The table also shows that subscribers (individual people) to mobile broadband service plans offered by AT&T Mobility and Verizon Wireless (affiliates of state-issued video franchise holders) increased by 17.7% during 2012 to 12.0 million subscribers.<sup>50</sup> Between 2010 and 2012, the number of subscribers to these mobile broadband plans almost doubled. Between 2008 and 2012, growth in wireless plan subscriptions increased by 401%. Subscribers to mobile broadband service plans now exceed wireline broadband subscribers by approximately 2.5 million subscribers.

**BROADBAND SUBSCRIBERS BY YEAR 2008-2012 (CALIFORNIA STATEWIDE)**

Categories of Broadband Subscribers	2008	2009	2010	2011	2012	2011-2012 Growth	2008-2012 Growth
Wireline <sup>51</sup> Residential Subscribers to State Video Franchisees & Affiliates (Number of Households Subscribing)	7,910,166	8,484,435	8,917,437	9,261,776	9,582,393	3.5%	21.1%
Mobile Broadband Service Plan Subscribers to AT&T and Verizon (Number of Devices Activated)	2,399,600	4,758,204	6,497,820	10,207,640	12,012,033	17.7%	400.6%

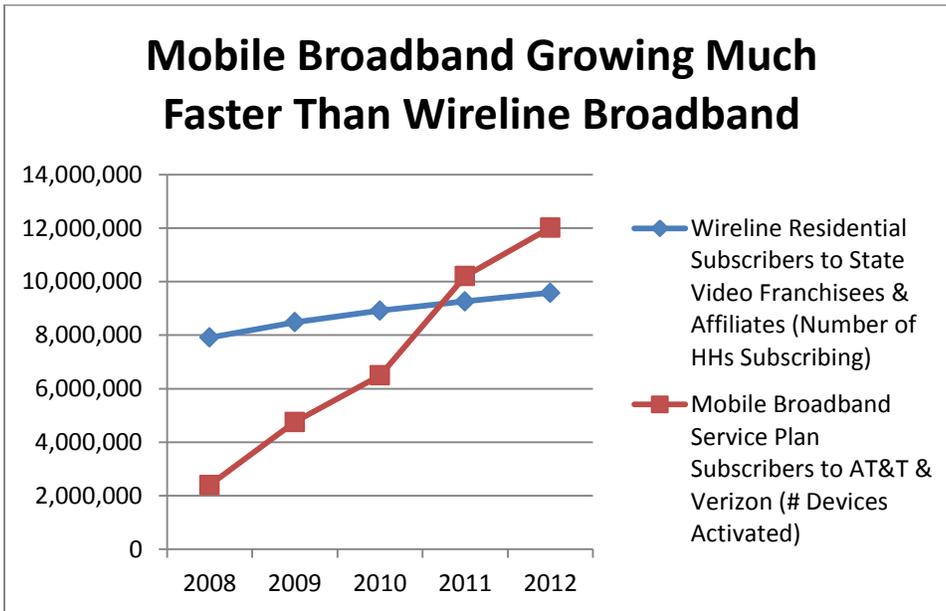
The explosive growth of mobile broadband service plan subscribers in relationship to wireline broadband subscribers is visually illustrated in the graph on the next page.

<sup>48</sup> These wireline numbers include the 677 subscribers who receive broadband via fixed wireless Internet connections in 2012 and for each of the previous years.

<sup>49</sup> The metrics in this and all previous DIVCA reports continue to use the FCC's 2010 definition of broadband as ranging "...from as low as 200 kbps.... Some recent broadband offerings even include 50 to 100 Mbps." Sources: FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559-64, paras. 5-10 (discussing the 200 kbps symmetrical standard).

<sup>50</sup> AT&T and Verizon calculated the reported number of subscribers to mobile broadband service plans using somewhat different methodologies. Verizon calculated the total number of subscribers by counting the total phone numbers associated with each service plan with California area codes and prefixes regardless of where the subscriber is physically located or where the bill is mailed. In contrast, AT&T calculated the number of subscribers based on the wireless phone numbers appearing on bills for service plans mailed to California addresses regardless of the phone number or area code associated with a particular service plan or the location of the particular subscribers whose phone numbers appears on the bill for that plan. Both methodologies result in an approximation of total mobile broadband service plan subscribers residing in California, which may be modestly understated or overstated.

<sup>51</sup> These wireline numbers include the 677 subscribers who receive broadband via fixed wireless Internet connections in 2012 and for each of the previous years.



According to a national survey conducted by the Pew Research Center in April and May 2013,<sup>52</sup> approximately 57% of all American adults use cell phones to access the Internet. According to the survey, 34% of these cell phone internet users “mostly use their phone” to access the internet as opposed to other devices such as a desktop, laptop or tablet computer. Those users who “mostly” use their phone to access the Internet were “relatively likely” not to have access to the Internet from a wireline connection. These respondents tended to be young adults, non-whites, and those with relatively low income and education levels.

These trends illustrate the importance of increased spectrum availability as a key factor that could enable continuing growth in Internet access via mobile devices.

<sup>52</sup> [Cell Internet Use in 2013](#), Pew Research Center, September 16, 2013

## **D. Wireline Broadband Penetration Increased to 75.6%; Mobile Broadband Penetration Increased to 42.9%**

The table below shows that the 2012 wireline<sup>53</sup> residential broadband penetration rate for households served by holders of state-issued video franchises or their affiliates at speeds greater than 200 kbps, increased 2.3 percentage points to 75.6% (9.6 million subscribers) during 2012, up from 73.3% (9.3 million subscribers) during 2011 and 70.7% in 2010 (8.9 million subscribers). This wireline broadband penetration rate has steadily increased, as more households subscribe to wireline broadband service at speeds greater than 200 kbps from state-issued video franchise holders or their affiliates.

The rapid pace at which mobile broadband penetration is increasing in comparison to wireline penetration is consistent with the rapid rise in mobile broadband subscribers reported in the previous section. The 43% mobile broadband penetration rate in 2012 highlights the fact that mobile broadband infrastructure is now a key component of California’s broadband infrastructure and its importance will only increase over time, as new applications for mobile wireless facilities emerge and more people purchase smartphones.

### **BROADBAND PENETRATION RATES BY YEAR 2008-2012 (CALIFORNIA STATEWIDE)**

Type of Broadband	2008	2009	2010	2011	2012
Wireline <sup>54</sup> Residential Subscribers to State Video Franchisees & Affiliates (Number of Households Subscribing)	63.5%	67.5%	70.7%	73.3%	75.6%
Mobile Broadband Service Plan Subscribers to AT&T & Verizon (Number of Devices Activated)	8.6%	17.0%	23.2%	36.5%	42.9%
Total Households in California	12,462,043	12,577,498	12,609,150	12,633,403	12,675,876
Population (18 & over) <sup>55</sup>	27,958,916	27,958,916	27,958,916	27,958,916	27,958,916

Wireline<sup>56</sup> residential broadband penetration rates are calculated by dividing the number of subscribers by the total number of households in California. In contrast, mobile broadband service plan penetration rates are calculated by dividing the number of subscribers by the total number of adults 18 and over in California<sup>57</sup>. For the mobile broadband penetration calculation, we use this population group instead of households because multiple individual adults living in the same household often have their own mobile

<sup>53</sup> These wireline penetration rates include the 677 subscribers who receive broadband via fixed wireless Internet connections in 2012 and for each of the previous years.

<sup>54</sup> These wireline penetration rates include the 677 subscribers who receive broadband via fixed wireless Internet connections in 2012 and for each of the previous years.

<sup>55</sup> The 2010 US Census provides the number of Californians 18 and over in 2010. We were not able to find similar figures for the other years, so we used the 2010 population as a proxy for each of the other years as well.  
[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_DP\\_DPDP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1)

<sup>56</sup> These wireline penetration rates include the 677 subscribers who receive broadband via fixed wireless Internet connections in 2012 and for each of the previous years.

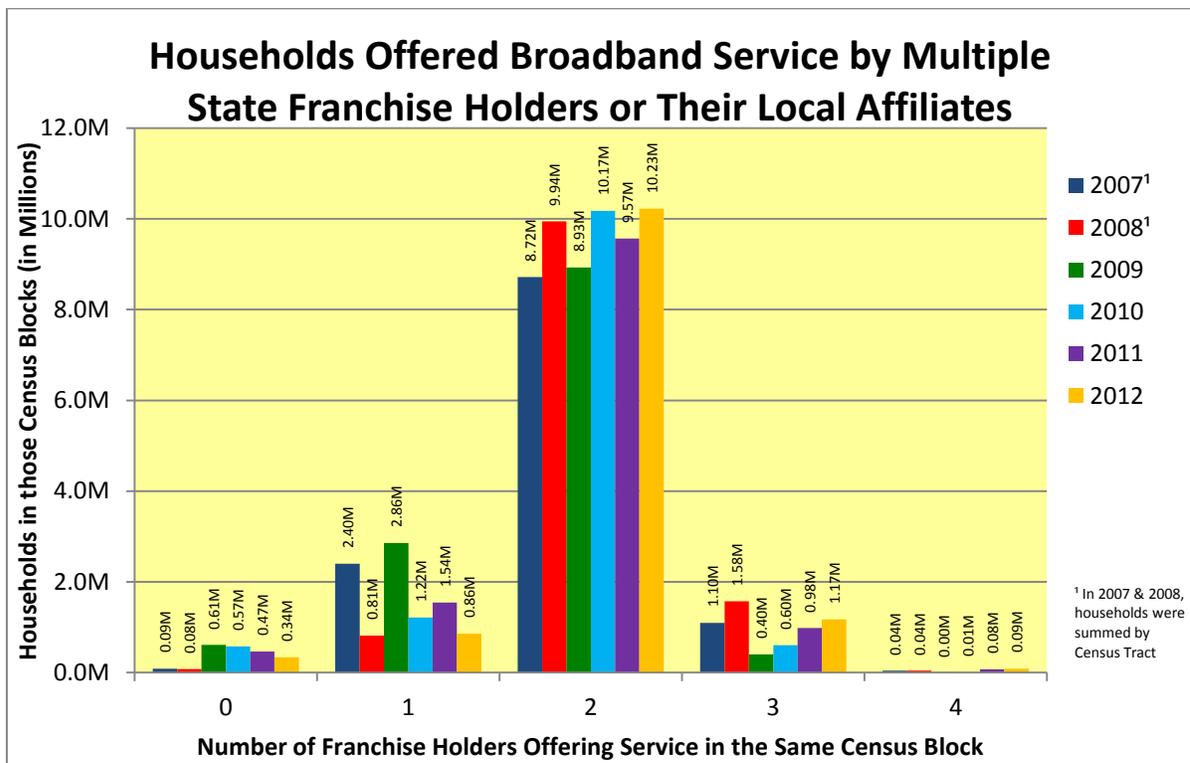
<sup>57</sup> The 18 & over population was obtained from the US Census Department,  
[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_DP\\_DPDP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1)

broadband wireless devices.

Although we use the number of adults 18 and over for calculating penetration rates, it is important to recognize that subscribers to mobile broadband plans also include numerous individuals under the age of 18. However, the precise age group of these individuals is difficult to define. Thus, the penetration rates presented above overstate penetration of mobile broadband subscription plans by some amount because the number of total available subscribers is limited to adults over the age of 18.

## E. Households Offered Broadband by Two or More Wireline Broadband Providers Increased by 8.5% to 90.3% of HHs

The chart below illustrates that 90.3% (11.5 million) of the households in the State are located in census blocks where wireline broadband<sup>58</sup> was offered by two or more state-issued video franchise holders or their affiliates in December 2012. This is an 8.5% increase over the 84% (10.6 million) households at the end of 2011. At the end of 2012, 10.3% (1.3 million) of the households in the State were located in census blocks with three or more wireline broadband providers. This is an increase of over two percentage points above the 8% (1.06 million) of Households (HHs) that had three or more broadband providers in 2011.



The map on the next page shows wireline broadband availability in terms of census blocks where 0, 1, 2, 3, 4, and 5 providers are offering service. The map includes data from state-issued franchise holders and their affiliates, which provide service using wireline and fixed wireless technology. This map shows that many rural areas have less choice in wireline or fixed wireless broadband providers than urban and metropolitan areas. We note that the map includes many unpopulated rural areas, which have no households, and sparsely populated rural areas. Consequently, these areas have no video franchise holders or their affiliates that choose to provide broadband.

<sup>58</sup> The metrics in this and all previous DIVCA reports continue to use the FCC’s 2010 definition of broadband as ranging “...from as low as 200 kbps.... Some recent offerings even include 50 to 100 Mbps.” Source FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559–64, paras. 5–10 (discussing the 200 kbps symmetrical standard).



## **F. Wireline and Fixed Wireless Broadband Speeds Are Generally Faster in Urban Areas**

The map on the next page shows wireline broadband availability in terms of maximum advertised download speed in California. It displays download speed data, provided by state video franchise holders and their affiliates, collected by the Commission under the auspices of the National Telecommunications and Information Agency's (NTIA) State Broadband Initiative (SBI), part of the American Recovery and Reinvestment Act (ARRA). See *Appendix C: Methods, Sources, and Data Limitations* for more information.

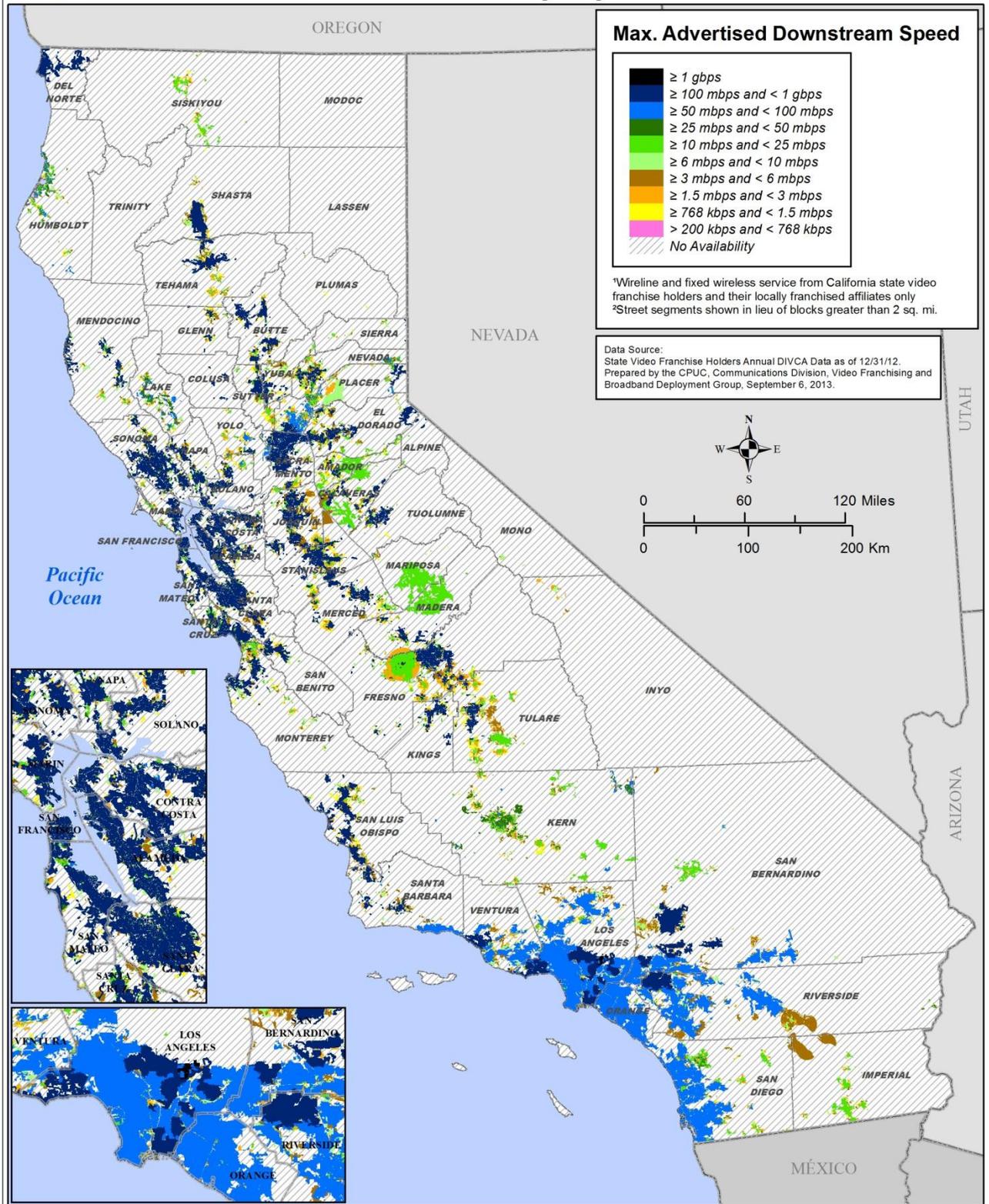
It is apparent from this map that urban and suburban areas are more likely to have greater advertised maximum broadband download speeds than rural or less densely populated areas. Comprehensive statewide broadband availability data (including broadband providers that are not video franchise holders) can be viewed on the California statewide broadband availability map.<sup>59</sup>

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<sup>59</sup> Cal. P.U.C., California Broadband Availability Map, <http://www.broadbandmap.ca.gov/>.

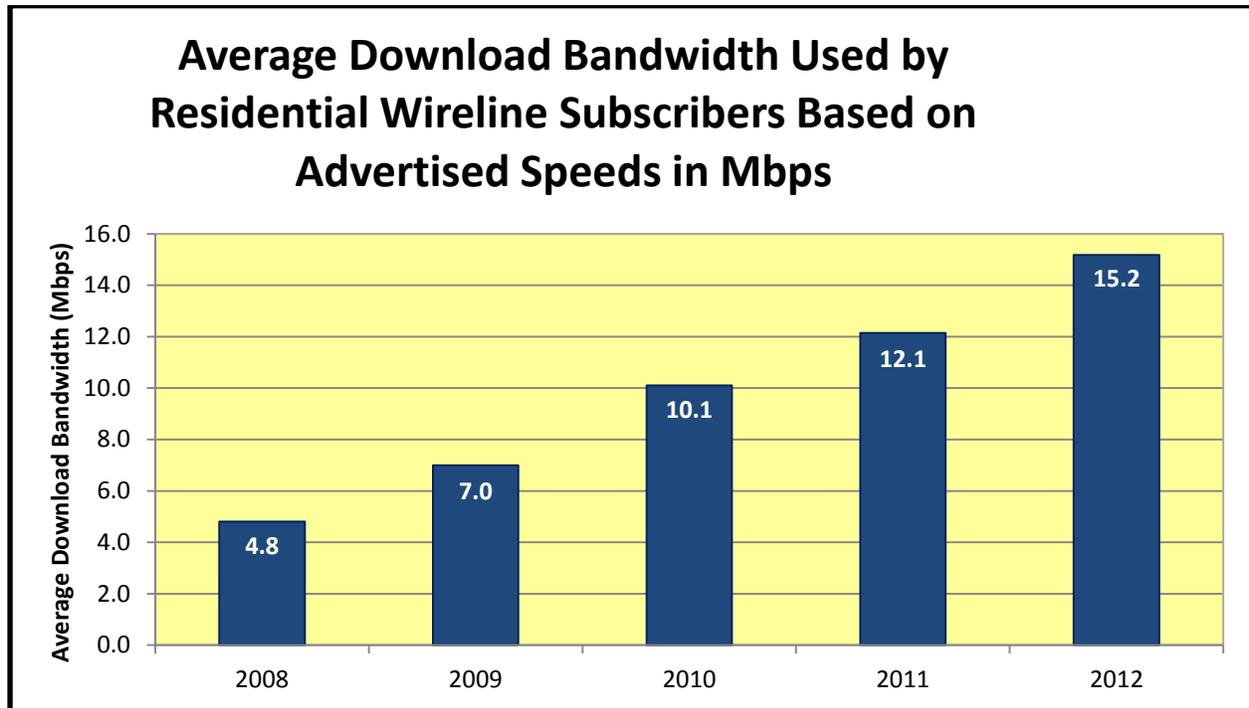


# STATE OF CALIFORNIA VIDEO FRANCHISING Broadband Availability<sup>1</sup> by Census Block<sup>2</sup>



## G. Californians Receive Faster Bandwidth and Subscribe to Faster Speed Tiers

The chart below shows that in 2012, 3.1 million more households in California received faster average residential wireline and fixed wireless broadband<sup>60</sup> than in 2011, based on advertised download speeds. The average broadband download bandwidth (speed) used by subscribers of state-issued video franchise holders and their affiliates increased from 4.8 Mbps in 2008 to 15.2 Mbps in 2012. This correlates with the previous data showing subscribers' transition towards faster speed tiers.

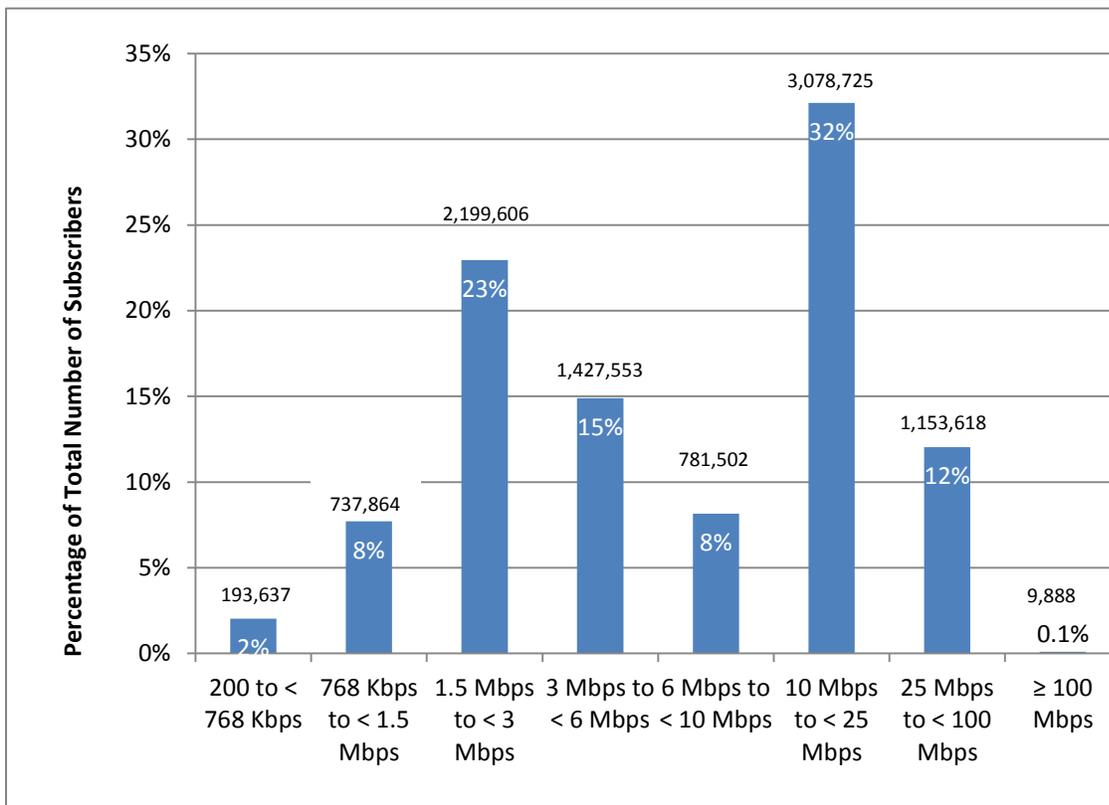


The bar chart on page 32 shows that in 2012, many more Californians subscribed to faster speed tiers than in any previous year.

<sup>60</sup> The metrics in this and all previous DIVCA reports continue to use the FCC's definition of broadband as ranging "...from as low as 200 kbps.... Some recent offerings even include 50 to 100 Mbps." Source FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559-64, paras. 5-10 (discussing the 200 kbps symmetrical standard).

The bar chart below shows the number of residential wireline / fixed wireless broadband<sup>61</sup> subscribers that purchased broadband services that fall into each of the download speed tiers shown on the bar chart, as reported by state video franchise holders or their affiliates.<sup>62</sup> This bar chart shows that more than half of all wireline connected households in California now subscribe to broadband in download speed tiers above 6 Mbps, which is the benchmark speed for an area to be considered “served by broadband” in California.<sup>63</sup>

### Wireline & Fixed Wireless Broadband Residential Subscribers by Download Speed – 2012



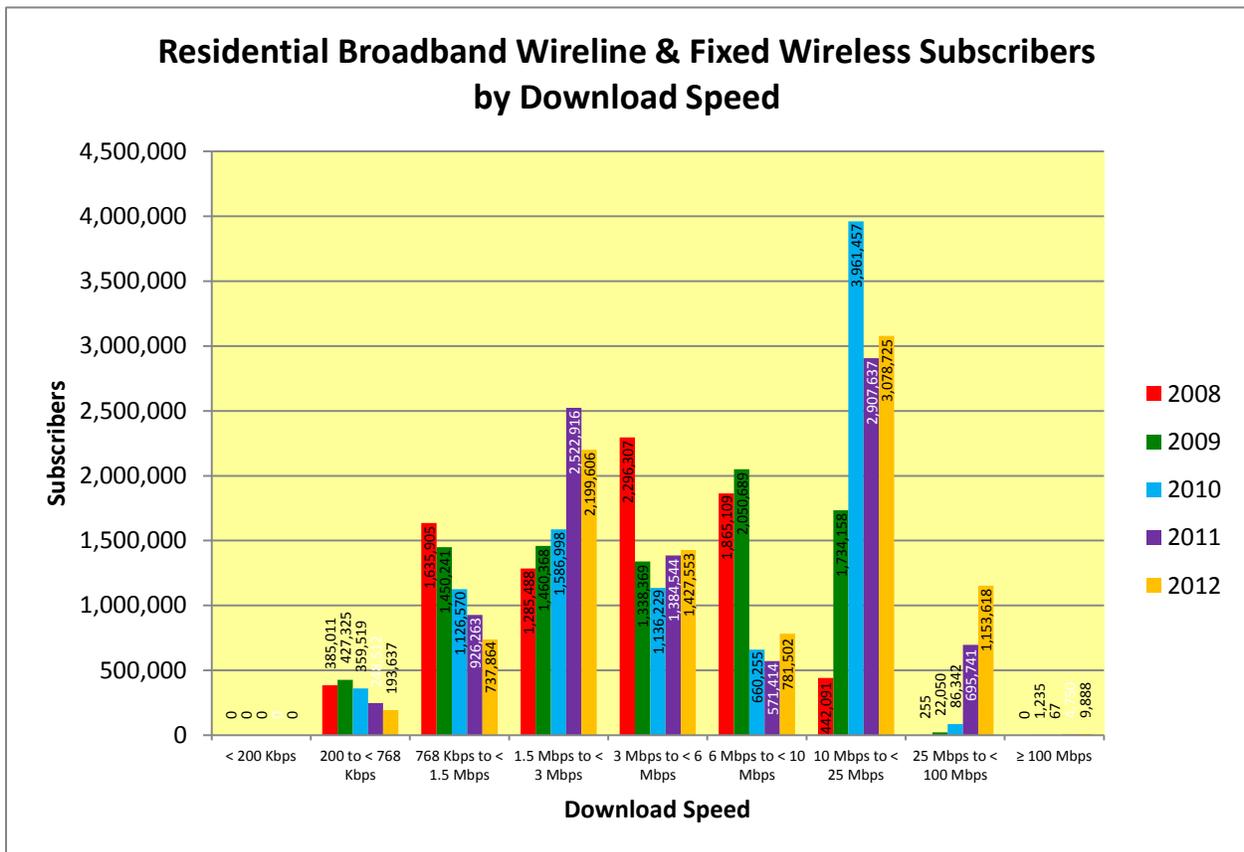
<sup>61</sup> The metrics in this and all previous DIVCA reports continue to use the FCC’s definition of broadband as ranging “...from as low as 200 kbps.... Some recent offerings even include 50 to 100 Mbps.” Source FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559–64, paras. 5–10 (discussing the 200 kbps symmetrical standard).

<sup>62</sup> Video Franchise Holders report to the FCC and the CPUC the number of customers / subscribers that purchase broadband services that fall into each of these speed tiers.

<sup>63</sup> D.12-02-015 defines underserved areas as an area where no provider offers broadband at download speeds of at least 6 Mbps and upload speeds of at least 1.5 Mbps. A served area is an area where broadband download speeds are at least 6 Mbps down and upload speeds are at least 1.5 Mbps.

The bar chart below shows that during 2012, 1.1 million households subscribed to wireline or fixed wireless broadband faster than 25 mbps, as reported by state franchise holders or their affiliates.<sup>64</sup> In 2012, almost 639,000 more households subscribed to wireline or fixed wireless download speed tiers above 10 Mbps than in 2011.

The most subscribed to download speed in 2012 was 10-25 Mbps, as it has been since 2010. In 2009, 6-10 Mbps was the most subscribed to download speed tier and in 2008, 3-6 Mbps was the most subscribed to download speed tier. This shift in the most subscribed to tier (from 3-6 Mbps to 10-25 Mbps) during 2008 -2012 reflects the increasing speed demands of consumers as they begin to utilize applications and services that require more bandwidth such as streaming video and audio.<sup>65</sup>



<sup>64</sup> Video Franchise Holders report to the FCC and the CPUC the number of customers / subscribers that purchase broadband services that fall into each of these speed tiers.

<sup>65</sup> These trends appear to be consistent since 2008 with the exception of the 10-25 mbps speed tier in 2010. It is unclear what may have caused the large increase in the 10-25 mbps speed tier in 2010 and the decline in 2011.

## H. Broadband Technologies: Cable Modems Overtake DSL Modems

The bar chart and pie chart on the following page show the technologies that state-issued video franchise holders and their affiliates used to deploy broadband<sup>66</sup> as of December 31, 2012.

The bar chart shows that in 2012 cable modems were used by holders of state-issued video franchises to serve 54% (5.2 million) of the residential households in franchise territories that subscribe to broadband, up from 52% (4.8 million) in 2011. This is an increase of four percentage points from 50% in 2010.

In contrast, during 2012 the number of residential subscribers to digital subscriber line broadband (DSL - both asymmetric and symmetric provisioned speeds) from state-issued franchise holders or their affiliates declined to 3.7 million or 39% of all households in the state. This is a decrease of five percentage points from 2010. DSL technology typically is used by telephone companies to deploy broadband over their existing copper plant.

Fiber-to-the-home technology provides broadband to a smaller percentage of residential subscribers in California, but it continues to show steady growth. In 2012, 7% of residential users were served by fiber optic technology, up from 6% in 2010 and 4% in 2008.

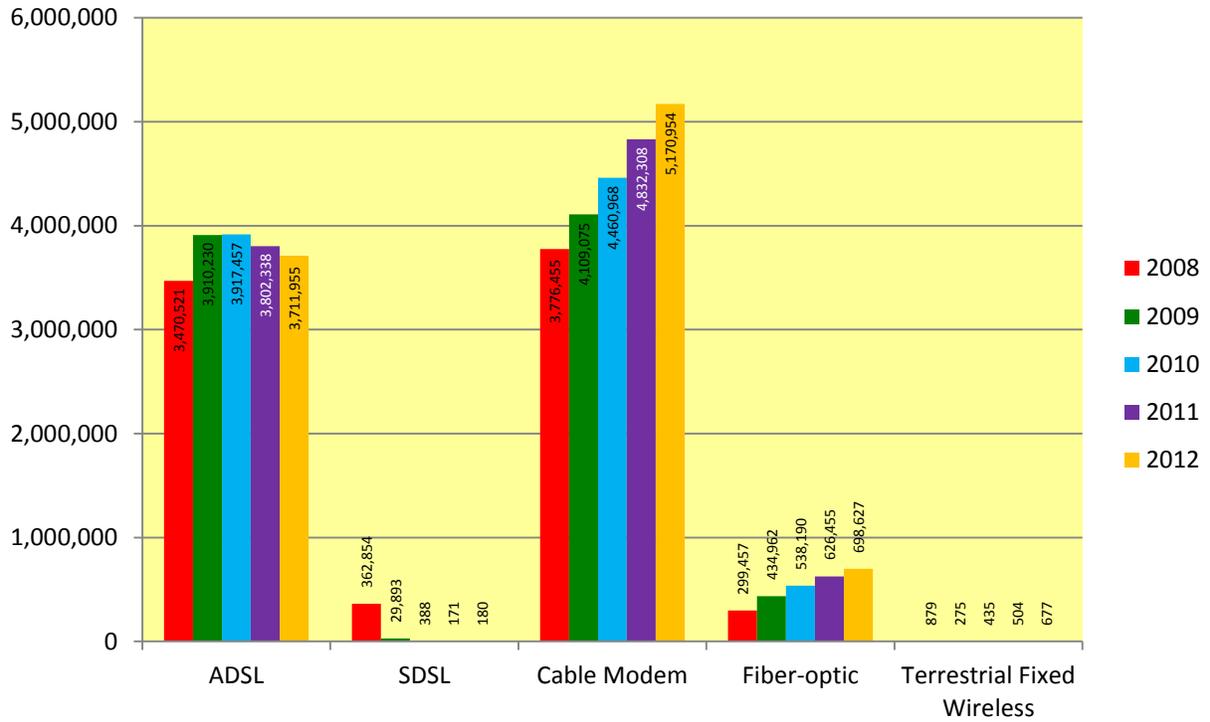
Fixed wireless technology provided broadband to 677 subscribers in California in 2012, up from 504 in 2011, but down from 879 in 2008.

The pie chart on the following page shows that in 2012 cable modem and DSL continued to be the two predominant wireline technologies used to provide broadband service deployed by state-issued franchise holders and their affiliates.

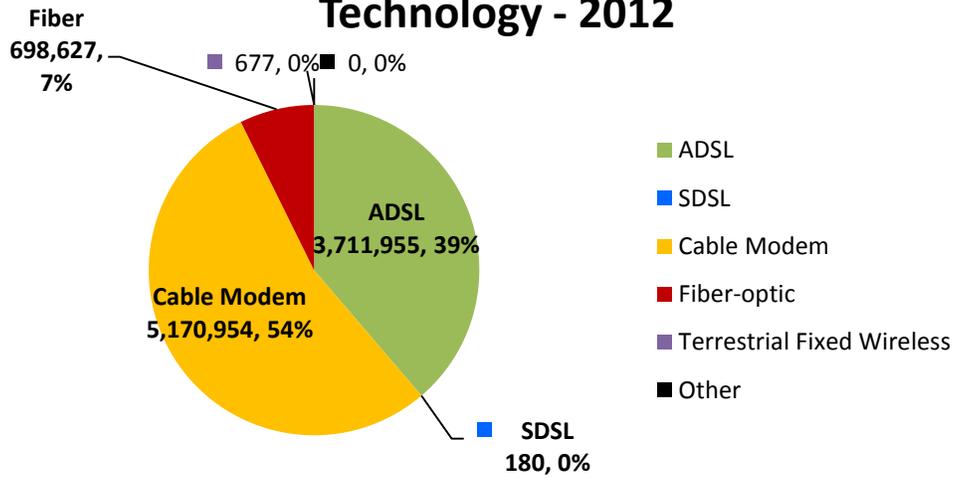
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<sup>66</sup> The metrics in this and all previous DIVCA reports continue to use the FCC's definition of broadband as ranging "...from as low as 200 kbps.... Some recent offerings even include 50 to 100 Mbps." Source FCC at: <http://www.fcc.gov/guides/getting-broadband>, *Sixth Broadband Progress Report, 2010*, 25 FCC Rcd at 9559-64, paras. 5-10 (discussing the 200 kbps symmetrical standard).

### Residential Wireline & Fixed Wireless Broadband Subscribers by Technology



### Residential Broadband Wireline & Fixed Wireless Subscribers by Technology - 2012



## **Appendix A: Implementing DIVCA: Decisions and Resolutions**

### **Rules Adopted to Implement DIVCA**

Shortly after DIVCA was enacted on September 29, 2006, the CPUC, on October 5, 2006 issued its Order Instituting Rulemaking to consider the adoption of a General Order and procedures to implement the Digital Infrastructure and Video Competition Act of 2006 (R. 06-10-005) (“Rulemaking”). Under this Rulemaking, the CPUC has developed rules for implementing DIVCA. This was accomplished in three phases.

#### **Phase I - Adopting Rules to Implement the DIVCA**

On March 1, 2007, following the receipt of comments and reply comments on the OIR and subsequent Proposed Decision, the CPUC issued Decision 07-03-014 establishing rules for implementing DIVCA and adopting General Order 169. (“Rules”) These rules set forth application requirements, CPUC procedures for considering applications, buildout, anti-discrimination, annual reporting requirements of both cable and broadband information by census tract, and other requirements as mandated by DIVCA.<sup>67</sup>

#### **Phase II - Adopting Non-Discriminatory Buildout Requirements for Small LECs**

On May 7, 2007 the assigned Commissioner issued a Scoping Ruling setting out issues to be addressed in Phase II of the Rulemaking. On October 4, 2007, the CPUC issued a Phase II decision adopting non-discriminatory buildout requirements for smaller companies and additional reporting requirements.<sup>68</sup> In Phase II, the CPUC determined that the “reasonable time” deployment standard applicable to franchise holders who are telephone companies with fewer than one million telephone customers should largely mirror the buildout timetable required of the larger telephone companies. Further, the CPUC determined that, in their annual reports to the CPUC, holders must provide video subscriber data, finding that such data are necessary in order for the CPUC to determine whether franchise holders are adhering to the requirements of DIVCA.<sup>69</sup>

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<sup>67</sup> On October 5, 2006, the Commission issued Opinion Modifying Decision 07-03-014 (D. 10-07-050, Jul. 29, 2010) in order to amend the form of the franchise certificate adopted in Phase I to conform to statutory requirements.

<sup>68</sup> Order Instituting Rulemaking to Consider the Adoption of a General Order and Procedures to Implement the Digital Infrastructure and Video Competition Act of 2006 Opinion Resolving Issues in Phase II ( D. 07-10-013 Oct. 4, 2007).

<sup>69</sup> Previously, the Commission’s Rules required the submission of data related to the number of households offered video services, but not the number of households subscribing to such services.

### **Phase III - Adopting New Rules to Administer DIVCA**

On March 27, 2008, the CPUC issued a Scoping Ruling setting out issues to be addressed in the third, and final, phase of the DIVCA Rulemaking. On July 10, 2008, the CPUC issued the Phase III decision amending the bonding requirements under DIVCA, adopting new rules regarding deadline extensions for buildout requirements, and additional reporting requirements.

Under DIVCA, holders of a state video franchise are subject to statutory requirements regarding, among other things, the extent and pace at which franchise holders must buildout facilities and offer video services to households. The statute provides that franchise holders may apply to the CPUC for an extension of the time for such buildout requirements to be satisfied, under certain circumstances. The Phase III added procedural requirements to ensure that holders' extension requests are made and decided in a timely fashion.

Further, Phase III eliminates an unintended and unfair asymmetry in the bond requirement under GO 169 between new entrants in the video marketplace and incumbent cable operators. Local franchises held by incumbent cable operators tend to be held by many separate affiliates of an ultimate parent. Verizon and AT&T, by contrast, have each applied for only one state franchise covering their entire video service areas. The Phase III decision changes the rules under DIVCA to require only one bond to be posted to cover all affiliated holders rather than separate bonds so that "incumbent" applicants for video franchises do not have additional burdens placed on them due to their historic corporate organization under the local franchising scheme.

Finally, Phase III requires holders to include in their annual data submitted to the CPUC broadband speed "tiers" that state video franchise holders make available. Numerous commenters urged the CPUC to wait until the FCC released its order requiring broadband reporting by census tract, broken down by speed tier and technology, and, thereafter, to adopt the FCC's speed reporting regime. The FCC released its Report and Order and Further Notice of Proposed Rulemaking adopting new requirements for reporting broadband service by speed tier on June 12, 2008.<sup>70</sup> The CPUC issued this decision to reflect the FCC's speed tier reporting requirements. Holders are now required to report the same broadband speed information that it reports to the FCC to the CPUC.

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<sup>70</sup> F.C.C., Form 477 Order, fn. 21, *Supra*.

## Resolutions

After gaining experience in processing applications, CPUC staff has made several recommendations for revisions to the application forms through two resolutions, T-17107 and T-17141, which were subsequently adopted by the CPUC. In addition, DIVCA provides for video franchise holders to pay fees to the CPUC calculated to equal the amount authorized in the CPUC budget for DIVCA implementation. Resolution T-17137 set the user fee due per household in a video franchise holders' service area for the 2007-2008 fiscal year. Subsequent to this Resolution, the user fee will be determined annually based on the pro-rata percentage of all state video franchise holders' gross state video franchise revenues that is attributable to an individual state video franchise holder.

## DIVCA Application Process

The application process was designed to be simple and straight forward. It requires applicants to file the following: a completed application form; a \$2,000 application fee; confirmation of technical, managerial, and financial qualifications demonstrated through the posting of a bond (\$100,000 to \$500,000); an affidavit attesting to the lawful operation of the franchise; a definition of the video service area sought; demographic information by census block group; the expected date for the deployment of video service in the video service area; and, a list of affected local entities.

The CPUC must determine within 30 days if an application is complete and issue the franchise within 14 days of such determination.<sup>71</sup> If the application is not complete, CPUC staff is required to notify the applicant, and the 30-day clock restarts. If the CPUC does not issue the franchise within the required 14 days, it is deemed issued. The new franchise holder then notifies the affected local entities.<sup>72</sup>

The CPUC's Phase I Decision allowed applicants, except for incumbent cable operators, to begin filing applications for state-issued video franchises as of March 1, 2007.<sup>73</sup> The first such application was filed by Verizon California Inc. on March 2, 2007. AT&T California filed its application on March 7, 2007. These franchise applications were reviewed for completeness, and video franchises Nos. 0001 and 0002 were issued to Verizon and AT&T on March 8 and March 30, 2007, respectively. All franchise applications and grants may be viewed on the Commission's web site at <http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/videofranchising.htm>.

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<sup>71</sup> Cal. Pub. Util. Code §5840 (h).

<sup>72</sup> Cal. Pub. Util. Code §5840 (n).

<sup>54</sup> Phase 1 Decision at Appendix B at 4; DIVCA required the CPUC to begin accepting applications no later than April 1, 2007; Cal. Pub.Util. Code §5847(g).

## **Appendix B: Collecting Data Mandated by DIVCA**

## DIVCA's Data Reporting Requirements

Holders of state-issued video franchise holders are required to submit data relating to their provision of video and broadband services annually by April 1.<sup>74</sup> Pursuant to DIVCA, all video franchise holders must report, by Census tract, the following:<sup>75</sup>

### 1. Video Information:

- a. The number of households in the holder's video or telephone service area.<sup>76</sup>
- b. The number of *low-income* households in the holder's video or telephone service area.
- c. The number of households in the holder's video or telephone service area to which video service is offered by the holder.
- d. The number of *low-income* households in the holder's video or telephone service area to which video service is offered by the holder.
- e. The number of subscribers in the holder's video or telephone service area.<sup>77</sup>

### 2. Broadband Information:

- a. The number of households to which the holder makes broadband available in California. If the holder does not maintain this information on a Census tract basis, in its normal course of business, the holder may reasonably approximate the number of households based on information it keeps in the normal course of business.
- b. The number of households that subscribe to broadband that the holder makes available in this state.
- c. The number of subscribers to each download and upload broadband speed tier
- d. Whether the broadband service provided by the holder utilizes wireline-based facilities or another technology.
- e. Types of technology used to deploy broadband services

DIVCA directs the CPUC to aggregate the data described above and to report the aggregated totals to the Governor and the Legislature annually no later than July 1.<sup>78</sup> In the following sections, we will discuss the broadband and video data submitted by the state video franchise holders as of April 1, 2008.

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<sup>74</sup> Cal. Pub. Util. Code §5960.

<sup>75</sup> *Id.*

<sup>76</sup> Incumbents must report by video service area; telephone corporations by telephone service area.

<sup>77</sup> Order Instituting Rulemaking to Consider the Adoption of a General Order and Procedures to Implement the Digital Infrastructure and Video Competition Act of 2006 Opinion Resolving Issues in Phase II ( D. 07-10-013 Oct. 4, 2007).

<sup>78</sup> Cal. Pub. Util. Code §5960.

## **Appendix C: Methods, Sources, and Data Limitations**

## **Video and Broadband Subscribership Data Sources**

DIVCA requires state video franchise holders to submit annual data describing their territories, availability of service, and subscribership (see Appendix B: Collecting Data Mandated by DIVCA). The data used in this sixth annual report were current as of December 31, 2012. These data were used throughout this report and provided a base from which to compare and evaluate providers' year-to-year performance under DIVCA.

All state video franchise holders who had state franchises and/or amendments issued before December 31, 2012, submitted annual data pursuant to Cal. Pub. Util. Code §5960. Each parent company of a state video franchise holder filed one annual report which included broadband and video service data for all of their state-franchised operations as well as their locally-franchised affiliates that operate in California and provide video or broadband service in the state.

The companies that filed annual reports for 2012 are: Astound Broadband, AT&T California, Bright House Networks, Cable USA, Cableview Communications, Calaveras Cablevision, CalNeva Broadband, Champion Broadband, Charter Communications, Comcast Cable, Cox Communications, Google Fiber, Greenfield Communications, Horizon Cable TV, Lone Pine TV, Mediacom Communications, Northland Cable Television, Sebastian Enterprises, Sierra Television, Sonic.net, Suddenlink Communications, SureWest Broadband, Time Warner Cable, Verizon California, and Volcano Communications.

The analyses of video and broadband service are based on these self-reported data from parent companies of the state video franchise holders listed above and exclude companies that are not yet state franchise holders.<sup>79</sup>

To aggregate the data reported by Census tract and map and analyze it, we used an Oracle database and a Geographic Information System (GIS). We also used Excel spreadsheets to aggregate, analyze and create graphs of the annual data. The findings are illustrated in maps, graphs, and charts throughout the report.

Analyses of broadband subscribership and penetration rates in this report were conducted using data collected from franchisees under the FCC's Form 477 requirements, as required by DIVCA.

## **Broadband Availability Data Sources**

Broadband availability data used in this analysis was collected by the CPUC's Broadband Mapping Program, under the auspices of the National Telecommunication and Information Administration's (NTIA) State Broadband Initiative (SBI), which implements the joint purposes of the American Recovery and Reinvestment Act (ARRA) and the Broadband Data Improvement Act (BDIA). The NTIA has authorized the CPUC to be the sole authority in California for collecting, compiling, analyzing, and presenting broadband data.

Broadband availability data collected by the CPUC's Broadband Mapping Program from current state

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<sup>79</sup> Some of the small video franchisees did not report broadband availability data.

video franchisees have been used in this report in lieu of data mandated under the 2006 Digital Infrastructure and Video Competition Act (DIVCA). We used this data because the SBI data is aggregated to the Census block and street segment level, and therefore can be up to 8,991 times more granular than data collected at the Census tract level under DIVCA.<sup>80</sup>

According to SBI rules, a broadband provider may elect to provide data on the availability of their service by either 1) address, or 2) Census block and street segment. If a provider offers service in a Census block that is less than 2 square miles in size, they may assert that they provide service to all households in that block. If a provider offers service in a block that is 2 square miles in size or larger, they must specify to which segments they provide the service. All collected data is aggregated by Census block and street segment, preserving the 2 square mile break. More details are available on the State Broadband Mapping Program webpage:

[www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/Broadband+Mapping/](http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/Broadband+Mapping/).

## **Buildout and Non-Discrimination Data Sources**

Under California Public Utilities Code §5890(e), telephone companies with more than one million subscribers are required to submit data supporting their compliance with the statute's 5-year buildout and non-discrimination requirements. These data were provided to the Commission as separate filings by AT&T and Verizon by their respective 5-year franchise anniversaries.

## **Determining the Number of Providers and Households Served per Census Block or Tract**

The broadband availability data from each provider were incorporated into feature classes in a file geodatabase according to State Broadband Initiative standards, where they exist in a many-to-one relationship to the Census blocks. That is, many availability records exist for each Census block, based on differences in provider name, technology type, and upstream and downstream speed. To estimate the number of distinct broadband providers per Census block, data from each provider was exported to shapefile then attribute-joined to a clean Census block shapefile, which removes any "duplicate" records, thereby enforcing a one-to-one relationship. After all provider data has been exported and joined, each distinct provider name, contained in a separate field, is concatenated together into a single field, using the field calculator's "&" operator. The resulting concatenation sequences were then sorted alphabetically, common blocks of sequences identified visually and selected, and the number of distinct providers entered in a new field. The same method was used for the street segment data.

Video data mandated under DIVCA are gathered in Excel data templates, and stored permanently in an ORACLE database, from which data is queried. Calculations, such as the number of distinct providers per Census tract, were performed directly in the queried tables, then exported to Excel and immediately joined to a Census tract shapefile for mapping.

Once the number of broadband providers per Census block and video providers per census tract were

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<sup>80</sup> There can be up to 999 Census blocks (CBs) in a single Census block group (CBG), and up to 9 CBGs in a single census tract.

determined, the aggregate number of households associated with each of these provider numbers could be summed from the shapefile attribute table.

## **New 2010 Census Data**

Census 2010 household data were used as the basis for estimating the aggregate number of households in Census blocks with a common number of broadband providers (0, 1, 2, 3, 4, or 5). These data were combined with household growth factors derived from the California Department of Finance's (CDF) annual household estimates by incorporated city and county, to project a household estimation to the current year for each Census block. We derived the household growth factor by dividing the CDF's current year household estimate by their previous year household estimate for each incorporated city, and the unincorporated balance of each county. This growth factor was then applied to all Census blocks whose centroid fell within the incorporated city or unincorporated balance of the county in question, to arrive at a new current year projected household estimate for each census block.

This method of household projection is a significant improvement over the methods used in the earliest DIVCA reports. In 2008 we used a single statewide growth rate for every calculation, both county and Census tract. We refined the method in 2009 by using separate growth rates for each county, and their component census tracts. This addressed the regional variation in growth rates but failed to address the urban/rural dichotomy,<sup>81</sup> which most likely resulted in an overestimation of the number of households served by multiple providers, painting a rosier picture of broadband competition in California than may actually be the case.

The current method accounts for variations in both regional household growth rates and urban and rural areas. As a result, the projections are closer to reality. But it also creates a statistical disconnect with previous reports, which became progressively less accurate the further away from Census 2000 they were. Prior to January 2011 when the 2010 census data were released, our best estimate of households in California was 12,790,143. The 2010 Census data showed that the actual number of households in California (in April 2010) to be 12,577,498. We had overestimated by about 1.7% statewide, and probably much more in locally.

## **New 2010 Census Boundaries**

The 2010 Census delivered more than just up-to-date household estimates. It also added new blocks and tracts and redrew existing boundaries. The number of Census blocks in California increased by 33.2% (533,136 to 710,145) over 2000. The number of Census tracts increased by 14.1% (7,049 to 8,043) over 2000. The effect of these increases is to reduce the average size of both blocks and tracts, thereby increasing their overall granularity as mapping units, and increasing the accuracy of any household estimation based on their selection. This increased accuracy can manifest as a decrease in the household estimate in specific areas outside urban cores, because the blocks or tracts which now comprise these areas have a smaller overall footprint. Blocks and tracts within urban cores are far less likely to have been split or redrawn – they therefore manifest only an increased overall household estimate.

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<sup>81</sup> With the exception of purely rural counties, such as Alpine, Modoc, and Trinity.

## Data Limitations

**Census Data Aggregation.** Despite the use of more granular Census boundaries and up-to-date data, there are still limitations inherent in their use for household estimation in local areas. Data is reported to us in a number of different units – address, street segment, Census block (under SBI), and Census tract (under DIVCA). Address-level availability data is aggregated to either Census blocks or street segments before being permanently stored in file geodatabase feature classes, reported to the National Telecommunications Information Agency (NTIA), and incorporated into the analyses in this report. For the purpose of estimating households, street segment availability was also “rolled up” to Census blocks. Most of our work here, therefore, deals only with Census geographies (block and tract).

Although Census blocks are a much more granular mapping unit than Census tracts, and provide a much better picture of broadband availability than Census tracts do of video availability under DIVCA, the unavoidable fact of aggregation means that staff’s ability to perfectly analyze and depict the availability of broadband and video service is still limited. The table below compares the relative sizes of Census tracts and blocks in California.

Geography	Count	Size (in sq. mi.)			Number of Households		
		Min.	Max.	Ave.	Min.	Max.	Ave.
Census Block	709,128	<0.000001	523	0.22	0	1,392	18
Census Tract	8,043	0.00052	7,008	19.7	0	8,362	1,562

Census tract reporting for video availability data, rather than actual address reporting, makes it impossible to know exactly how many households are offered service in any given Census tract, or how many households exist within the franchise territory of any given state franchise holder. Individual franchise holders report the number of households to which they offer service by Census tract, and for Census tracts where they are the only provider, this figure can be taken as the actual number of households offered service in that tract; but for Census tracts in which there are multiple providers, it is impossible to know whether or not the competing services are offered to the same households. Therefore, simply adding the “households offered video” figures from two or more providers may result in double or triple counting, bringing some availability and subscription rates to over 100%.

Consequently, mapping where competition has occurred (one of the core concerns of DIVCA) is complicated. Since it is impossible to know where within each Census tract video service is being offered, we can only classify tracts as being either served or unserved by each provider, then add up the number of providers in each tract. In this way, the current level of video competition was also overstated.

Similarly for broadband, if one household in a Census block was offered service by any franchise holder, then it was assumed that all households within it were offered the service, and the block was considered

“served.” This naturally results in an overstatement of the level of availability. Error estimation was not done for this report, so it is not known how inaccurate these estimates are. Nor would error estimation be of much use in this case, due to the use of aggregated data, rather than discreet data points. On the other hand, the population density within California varies widely, as reflected in the extreme variation in its Census geography sizes. This means that the Census tracts comprising California’s vast rural north and east (where most of the error in the results probably lie) are relatively few, and that the total number of households this represents are also relatively few.

**Street Segment Data Aggregation.** Street segments amounted to about a third of all broadband availability data collected; yet linear (polyline) data has no associated Census household data. It was therefore necessary to derive the data by an overlay selection with another layer. A simple overlay selection with a Census block layer containing provider and household data wouldn’t work since street segments, by their very nature, overlap or straddle multiple Census blocks, which would result in double counting of households in many Census blocks. Instead, we applied a Census block overlay selection for each group of street segments with a common number of providers; then removed any selected blocks that may already have had a non-zero provider count (i.e. blocks 2 square miles in size or larger), before summing the households in those blocks.<sup>82</sup> The Census blocks and street segments with no providers could not be directly selected and summed; since they overlap each other (they are not spatially exclusive). So instead, that total was derived by subtracting the Census block / street segment household totals for 0, 1, 2, 3, or 4 providers from the statewide household grand total.

An implicit assumption in this method is that a single served street segment causes an entire block (and all households in it) to be classified as served. The same assumption is also made regarding the number of households being served by 0, 1, 2, 3, or 4 video providers, in this, and previous, years’ reports.

When drawing conclusions from this report, it is important to keep in mind that only services offered by state-issued video franchise holders and their locally-franchised affiliates are reflected. Broadband and video services offered by local independent wireline providers and wireless and satellite ISPs are, by definition, excluded.

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<sup>82</sup> Note that Census blocks and street segments with a non-zero provider count are spatially exclusive, due to the 2 square mile SBDD criteria; so a simple additive approach was used.

## **Appendix D: Video Franchise Area Maps**